







USAID's Bagh Activity

Submitted to

USAID-BANGLADESH By WildTeam Ltd. USAID Cooperative Agreement No AID-388-A-14-00001

Submission Date: 15April 2015

Project office Contact Name:

Prakash K Silwal, Chief of Party, USAID's Bagh Activity Road 38, House 42, Gulshan-2, Dhaka +880-2-9896370 (tel.) prakash@wild-team.org

Awardee Contact Name:

Prof. Md. Anwarul Islam
Home Office Manager and CEO, WildTeam
Cosmos Centre, 69/1 New Circular Road, Malibagh, Dhaka
+88-2-9355576 (tel.)
anwar1955@gmail.com





USAID's Bengal Tiger Conservation Activity (Bagh)
USAID Cooperative Agreement No. AID-388-A-14-00001
Dated April 15, 2015

Prepared by Bagh M&E team in collaboration with WildTeam's Monitoring and Evaluation (M&E) workstream.

DISCLAIMER

The author's views expressed in this publication do not necessarily reflect the views of the United States Agency for International Development or the United States Government

Last updated: 15April 2015

Contents

1	Intr	oduction	5
1.	1	Purpose and guiding principles of the Bagh M&E Plan	5
1.	2	Bagh background	7
1.	3	Bagh link to USAID/Bangladesh's Country Development Cooperation Strategy	10
2	Bag	gh – results framework	12
2	.1	Bagh – development hypothesis	12
2	2	Critical assumptions and potential risks	14
2	.3	Bagh objective	14
2	4	Selection of performance indicators	15
3	Dat	a collection and communication of progress	16
3.	1	Baseline survey and establishment of targets	16
3.	2	Data collection, processing and analysis	17
3.	.3	Data quality assurance	18
3.	4	Management Information System	20
3.	.5	Data reporting and use	2
4	BAG	GH – M&E organization	. 22
5	Eva	luation	. 25
List	of fig	gures	
Figu	re 1:	Bagh intervention area	9
Figu	re 2:	Bagh's link to USAID/Bangladesh CDCS Results Framework	1
Figu	re 3:	Bagh Results Framework	13
Figu	re 4:	Bagh M&E structure and reporting	23
Figu	re 5:	M&E data flow of Bagh activity	24
		The upstream and downstream relationships between a numerical indicator and related ve results	8 ⁻

Bagh Monitoring and Evaluation Plan

Annexes

Annex A: Bagh Performance Indicator Reference Sheet (PIRS)	. 26
Annex B: Consolidated list of indicators reported under Bagh	6
Annex C: Bagh performance data table	. 64
Annex D: Performance management task schedule	72
Annex E: Data collection plan	73
Annex F: The use of Outcome Harvesting to enrich Bagh indicators	8

Acronyms

ACME Accelerating Capacity for Monitoring and Evaluation

ADS Automated Directives System
AIG Alternative Income Generating
AOR Agreement Officer's Representative
Bagh Bengal Tiger Conservation Activity

BCAS Bangladesh Centre for Advanced Studies

CBO Community Based Organization

CDCS Country Development Cooperation Strategy

CEO Chief Executive Officer

CMO Co-management Organization

COP Chief of Party

CREL Climate Resilient Ecosystems and Livelihoods

DCOP Deputy Chief of Party
DO Development Objective
DQA Data Quality Assessment
ERT Emergency Response Team
FGD Focus Group Discussion
FD Forest Department

FTRT Forest Tiger Response Team GCC Global Climate Change

GEM General Elimination Methodology
GoB Government of Bangladesh
GIS Geographic Information System
GPS Global Positioning System
GWC Gender Working Committee

HO Head Office

IPAC Integrated Protected Area Co-management

IR Intermediate Result
LEA Law Enforcement Agency

LOP Life of Project

M&E Monitoring and Evaluation
M&E Plan Monitoring and Evaluation Plan
MoEF Ministry of Environment and Forest
MoFL Ministry of Fisheries and Livestock
MRV Monitoring, Reporting and Verification

NTFP Non-timber Forest Product
OH Outcome Harvesting
PDT Performance Data Table

PES Payment for Environmental Services
PIRS Performance Indicator Reference Sheet

PMP Performance Monitoring Plan PPP Public-private Partnership

RF Result Framework

Bagh Monitoring and Evaluation Plan

SI Smithsonian Institution

SMART Spatial Monitoring and Reporting Tool
STTA Short Term Technical Assistance
SRF Sundarbans Reserved Forest

THC Tiger Human Conflict
UAV Unmanned Aerial Vehicle

USAID United States Agency for International Development

USG United States Government
VCF Village Conservation Forum
VTRT Village Tiger Response Team
WCCU Wildlife Crime Control Unit
WTS Wildlife Technical Specialist

1 Introduction

1.1 Purpose and guiding principles of the Bagh M&E Plan

The BaghMonitoring and Evaluation Plan (M&E Plan) is a strategic tool for monitoring the performance of the Bagh activity and reporting on the progress made toward the achievement of its target results. The M&E Plan includes the projects development hypothesis, Results Framework (RF) with critical assumptions, illustrative interventions, a minimal set of well-defined performance indicators in the indicator performance reference sheets, a performance data table (PDT) that includes baseline and expected values for each project year, description of data collection and analysis methods, an evaluation plan, and a Performance Management Task Schedule that highlights special studies, surveys the project will undertake in support of robust M&E system. The M&E Plan folds into the United States Agency for International Development (USAID)/Bangladesh Mission Performance Management Plan (PMP) under the USAID/Bangladesh Country Development Cooperative Strategy (CDCS) through the Development Objective 4 (DO4) results and related performance indicators.

Performance indicators will be used to measure progress towards targeted Intermediate Results (IRs) and Sub-IRs, inform decisions to adjust course, and facilitate reporting of results to USAID, counterparts, and other stakeholders. The Bagh M&E Plan will rely upon systematic collection, analysis and reporting of information (quantitative and qualitative) to ensure quality control of information and identify or avoid shortcomings in project activities. Information generated from the M&E system will allow project managers to make informed decisions on the overall management and performance of the project and provide a rationale for any needed changes in project implementation and/or design.

Bagh will train relevant project staff in relevant data collection methods, and provide associated feedback to component managers, partners and field implementers. Bagh's M&E system will be coordinated with relevant ongoing projects in Bangladesh that contribute to the IRs in order to ensure similar reporting formats as well as robust, methodologically valid and comparable data that can be combined at the highest level to show multiple projects' impacts.

The principles governing the Bagh M&E Plan are based on USAID Automated Directives System (ADS) Chapter 203 assessing the learning guidance:

- A tool for self-assessment: The Bagh team, in close consultation with the USAID DO4 team, will systematically collect and analyze performance information to track progress toward USAID/Bangladesh's planned objectives/results for continually assessing whether our conservation actions are having their intended impact.
- **Plan early for performance management:** The foundations of the M&E Plan have been planned for and developed since the design and issuance of the Bagh award.

This development has helped direct data review for performance measures, planning for development of data collection within project activities, adequate planning across technical offices and within the donor community, among others.

- Alignment with USAID's strategy and processes: The M&E Plan is developed based on the USAID/Bangladesh DO4 PMP which reflects the CDCS and experiences from previous projects. Planning and regular review of results by indicator will occur on a set schedule in accordance with USAID requirements.
- **Performance-informeddecision-making:**The M&E system is designed to inform decision-making which is sound and evidence-based.
- **Transparency:** To increase transparency, data quality assessments (DQAs) will be conducted, and any known limitations will be documented in the M&E Plan and in DQA reports.
- Gender:The M&E Plan captures gender specific differences under Bagh as well as results and impact. In order to promote an effective gender engagement, Bagh will focus on reviewing current gender trends related to work and customary roles in Bagh intervention sites, analyzing gaps, perceptions, inclusion and behavioral change needs related to gender through the engagement of youth, senior citizens and men and women's involvement in project activities. Through its training and outreach activities, Bagh will design interventions to create awareness on tiger conservation in relation to men's and women's current respective roles and responsibilities. Training and awareness programs will include techniques to increase participation of women in decision-making to conserve Sundarbans. Bagh will effectively engage men and women in tiger conservation through alternative income generating activities, thus reducing their natural resource dependence and improving their livelihoods
- **Communication:** The M&E Plan is designed to enable the communication of results achieved, or not attained, to advance organizational learning and tell the Agency's story.
- **Cost-Effectiveness:** When selecting performance indicators, efforts are made to streamline and minimize the data collection and reporting burden. Efforts must be made to ensure that only data useful for decision-making is collected. Data collection for each indicator will be reviewed with relevant stakeholders. Where applicable, the project will use performance measures that are in alignment with host country counterparts and other donors.
- **Participation:** Finally, the M&E Plan is developed in a participatory manner. USAID/Bangladesh and implementing partners played an active and collaborative part in preparing this M&E Plan. Where appropriate, selected stakeholders have been engaged in reviewing elements of the draft M&E Plan.

1.2 Baghbackground

USAID's Bagh activityfocuses primarily on tiger conservation in the Sundarbans, home to the Bengal tiger. Under the leadership of the Bangladesh Forest Department, ThisUSAID's Bagh activity is implemented by WildTeam, an organization working for biodiversity conservation in Bangladesh since 2003. The Bagh activity will also receive technical support from the Smithsonian Institution (SI) and the Bangladesh Centre for Advanced Studies (BCAS). The project period is 4 years, from 15 January 2014 to 14 January 2018. The value of the project is \$11,887,007.25. As per USAID guidelines, it is suggested that between 5 - 10percent ofprogram or project resources be allocated for monitoring and evaluation (M&E) purposes. The total amount available for M&E over the course of Bagh implementation is approximately 6.77 percent which includes M&E staffing costs and the M&E Special Activity Fund.

As USAID's Bagh activity moves forward, it will ensure more than the survival of Sundarbans tigers. When tigers thrive in the wild, it will also ensure the survival of thousands of wild-flora and fauna of the Sundarbans and protect the green mangrove wall that shields millions of people from natural disasters and supports their livelihood. The Bagh activity will work on making the relationship between the Sundarbans and the adjacent people stronger and safer by empowering communities and institutions in taking ownership of protecting the majestic Bengal Tiger and its magnificent forest home. The Bagh activity has five components, listed below.

Component 1 (C1): Expanded knowledge base

Bagh supports priority research to inform wildlife management interventions for the targeted landscapes. The activity also develops tools and platforms for knowledge sharing, collaborative research, and learning.

Component 2 (C2): Reduced illegal wildlife trafficking

Based on a comprehensive needs assessment, Bagh provides targeted support to the development of the national Wildlife Crime Control Unit (WCCU). The activity facilitates engagement with regional and international enforcement bodies, strengthens patrol efforts on the ground, and pilots models for community-based anti-poaching action.

Component 3 (C3): Minimized human-wildlife conflict

Communities living adjacent to the Sundarbans still have unhealed wounds resulting from tiger-human conflict. Baghis strengthening theVillage Tiger Response Teams whomanage stray tigers, provides veterinary training for conflict tiger handling, establishes a system for conflict prediction and monitoring and promotes safety skills inside the forest to minimize injury and fatalities to tigers and humans.

Component 4 (C4): Enhanced communication, outreach and gender engagement

At the national and international levels, Bagh's communications focus will be to reconnect different audiences to play their part in conserving the tiger as the flagship species and natural quardian of the Sundarbans, thus conserving natural resources for future generations.

Bagh will also continue and build upon WildTeam's ongoing "Mother-like Sundarbans" campaign to inspire the involvement of the local communities to engage themselves collectively and individually in understanding how their actions partly define the Sundarbans current status. Behavioral change through improved communications strategies, outreach and gender engagement will be targeted throughout this campaign for addressing human threats to wildlife including tigers and the Sundarbans as their habitat. Additionally, at the local level, Bagh will build on the learning and successes of the VTRT behavioral change initiative to tackle deer poaching and consumption behaviors.

Building on WildTeam's already existing "WildWomen" think-tank, Bagh's Gender Specialist has created a Bagh Gender Working Committee (GWC) to incorporate Bagh's Gender Approach throughout their activities. The Bagh GWC builds capacity of its team members - and thus the communities in which Bagh works - to implement these guiding principles throughout the Bagh activities.

Component 5 (C5): Improved livelihoods for conservation

Promoting environmentally sustainable livelihood ideas in the Sundarbans region is imperative for conserving the forest. Bagh will work on mapping forest resources that local communities use daily, as well as review past and current Alternative Income Generating (AIG) activities and their viability in Bagh's targeted sites. From this, Bagh will formulate its own strategy that may either work to expand existing alternative livelihoods, or create new options should there be a market for new products in addition to launching a national competition to inspire innovative eco-friendly livelihood ideas for people who depend on the Sundarbans for food and income.

Bagh will gather information and assess the effectiveness and environmental, social and economic impact of existing livelihood schemes, and will learn from global best practice innovations to identify market-driven, desirable alternative livelihoods which are climate change resilient and adoptable by groups that are most vulnerable to climate change and HTC. Bagh is also looking at solutions through public private partnerships to generate mobility for niche market value chains as well as develop an ecotourism strategy paper to stimulate further jobs in and near the Sundarbans.

Bagh interventions will cover the areas under Sundarbans Impact Zone (fig.1)

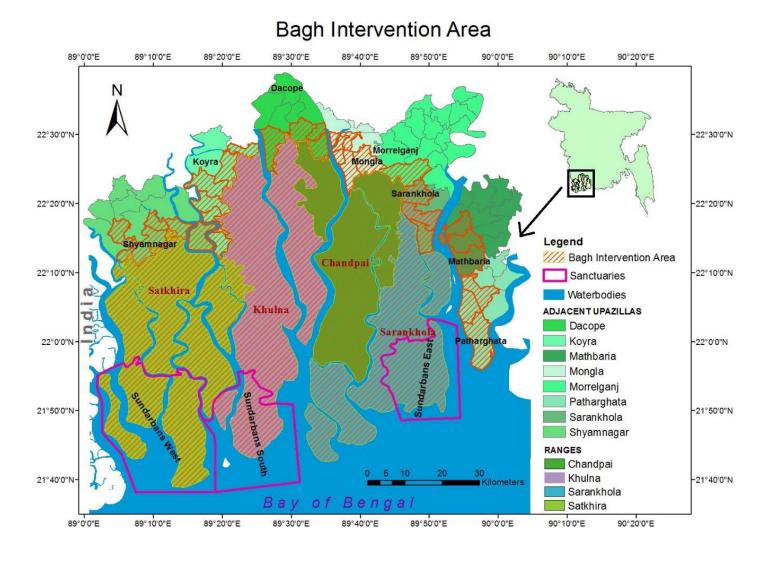


Figure 1: Bagh intervention area

1.3 Bagh link to USAID/Bangladesh's Country Development Cooperation Strategy

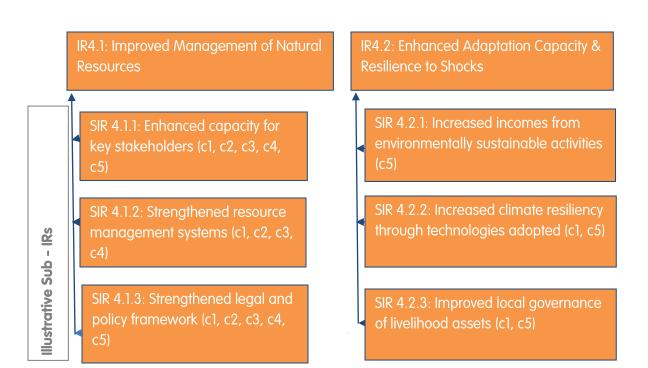
USAID/Bangladesh supports GoB's Vision 2021 through the goal statement, "Bangladesh, a knowledge-based, healthy, food secure and climate resilient middle income democracy," and will contribute to the GoB's long term development goals while focusing on improving the lives of the poor. The results framework for the Country Development Cooperation Strategy (CDCS) 2011-2016 presents four Development Objectives (DOs) that contribute to USAID/Bangladesh's overall development goal and Bagh contributes to *DO4: Responsiveness to climate change improved.*

USAID/Bangladesh has a specific commitment to improved climate change responsiveness. Its 2011-2016 CDCS is oriented around four DOs. Development Objective 4 (Responsiveness to Climate Change Improved) aims to increase the nation's responsiveness, adaptation, and mitigation of climate change through the following three interrelated Intermediate Results (IR):

- IR 4.1 Improved management of natural resources and biodiversity;
- IR 4.2 Increased adaptation capacity and resilience to shocks; and
- IR 4.3 Strengthened capacity to reduce emissions.

In line with USAID/Bangladesh's CDCS, the Bagh Project will contribute to the achievement of Development Objective 4: Responsiveness to Climate Change Improved – by focusing on promoting sound natural resource management, supporting the reduction of illegal wildlife trafficking, minimizing human-wildlife conflict, expanding the knowledge base for wildlife conservation, and improving livelihoods for conservation. The activity will contribute to conserving populations of Bengal Tigers and other charismatic species and to maintaining the integrity of their habitat. The Bagh project will contribute specifically to the achievement of CDCS IR 4.1: Improved Management of Natural Resources and Biodiversity and IR 4.2: Enhanced Adaptation Capacity to Resilience to Shocks. The results that Bagh's Components will contribute to are shown in Figure 2.

improved



DO4: Responsiveness to climate change

Figure 2: Bagh's link to USAID/Bangladesh CDCS Results Framework

Linking Bagh's Results Framework to the CDCS Results Framework. Bagh's work to strength resource management systems (CDCS DO 4's IR 4.1.2) will be achieved through its robust research agenda, which will provide several guidelines (such as a wildlife management guidelines) as well as various assessments to support the Forest Department and their efforts to conserve and sustainably maintain the Sundarbans. Resource management systems will be further strengthened through Bagh's communications outreach and training activities. (Please see Bagh Annual Work Plan and Figure 3 Bagh Results Framework, for further details.)

Bagh will support CDCS DO 4 IR 4.2.1 under Component 5, Livelihoods. Bagh will work to increase incomes from environmental sustainably activities and curb the need to solely depend on the Sundarbans resources. This shift in dependency will secure a healthy, stable environment and future for the Sundarbans' diversity, including the Bengal tiger.

Synergies with CREL. USAID's other environment activity Climate Resilient Ecosystems and Livelihoods (CREL) Project also supports DO4 of the USAID/Bangladesh CDCS. CREL promotes

sound natural resource management and biodiversity conservation by working with Comanagement Organizations (CMOs) and GoB agencies (Forest Department, Department of Fisheries and Department of Environment). The project aims to build resiliency to climate change impacts through improved livelihoods and management of critical ecosystems in priority regions of the country. Under IR 4.1: Improved Management of Natural Resources, Bagh and CREL will work together to establish joint patrolling groups in Sundarbans region by involving Bangladesh Forest Department, Co-management Organizations (CMOs), Village Tiger Response Teams (VTRTs), and Forest Tiger Response Team (FTRT). Under IR 4.2: Enhanced Adaptation Capacity & Resilience to Shocks, Bagh will work with CREL to select beneficiaries and involvement of beneficiaries with Alternative Income Generating (AIG) activities for forest resource collectors and other vulnerable populations, such as tiger widows.

2 Bagh – Results Framework

2.1 Bagh – development hypothesis

USAID has identified the development hypothesis under its DO4: "Improvedmanagement of natural resources alongside livelihood diversification, climate risk management and enhanced capacity for low emissions development will address adoption and mitigation of Global Climate Change (GCC), while providing sustainable economic benefits and clean energy resources for Bangladesh."

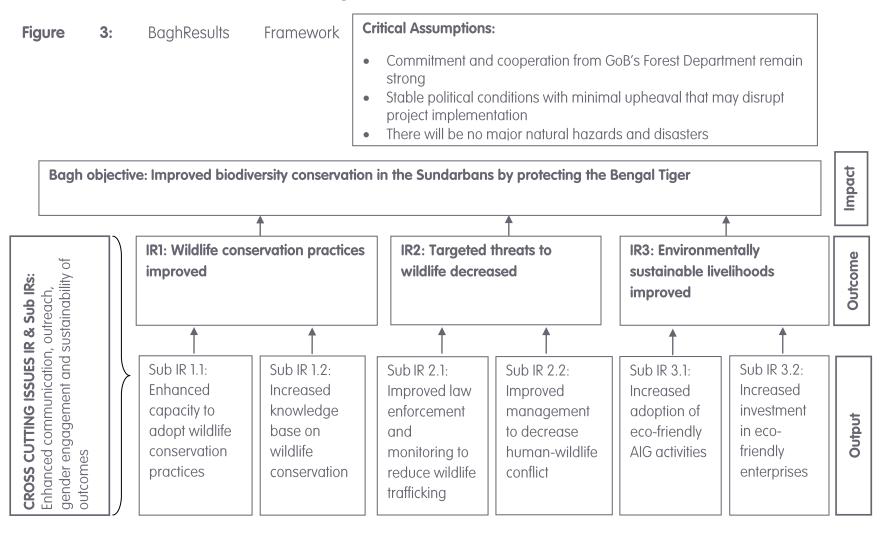
The Baghactivity hypothesisis interlinked with the USAID's development hypothesis:

"If wildlife conservation strategies are adopted and practiced by local communities and government entities, then the tigers will be protected thereby conserving the Sundarbans and its biodiversity, increasing/allowing community's access to sustainable resources for their respective livelihoods."

The Bagh Results Framework (RF) is shown in figure 3.

[•]¹ USAID. 2012. Development Objective 4: Responsiveness to Climate Change Improved: Performance Management Plan. September 2012. Dhaka. page 5

Bagh Results Framework (RF)



2.2 Critical Assumptions and Potential Risks

USAID/Bangladesh has identified several assumptions that are beyond control of the project or the mission, which may affect the outcomes and achievements of the BaghActivity in its DO4 Performance Monitoring Plan (source: footnote 2):

- "National response to natural disasters and environmental risks keeps adverse outcomes manageable;
- GoB commitment to climate change adaption and mitigation remains strong; and
- International commitment (including funding) to global climate change adaptation and mitigation remains strong."

Critical assumptions and potential risks to implement the Bagh include:

- Commitment and cooperation from GoB's Forest Department remain strong
- Stable political conditions with minimal upheaval that may disrupt project implementation
- There will be no major natural hazards and disasters

2.3 Bagh Objective

The main objective of USAID's Bagh activity is 'improved biodiversity conservation in the Sundarbans by protecting the Bengal Tiger'.

Bagh will reach this objective by achieving threekey intermediate results:

IR1: Wildlife conservation practices improved

Bagh will work with partners to expand the currently limited knowledge base of the Sundarbans tiger habitat. Understanding the unique tiger habitat will contribute to the sustainability of tiger conservation efforts and to the Sundarbans' natural resource management practices. Expanding the knowledge base will entail conducting applied research work with a goal of designing and structuring a conservation framework in order to protect the Bengal tiger and its habitat harmoniously with the peripheral communities' needs. Additionally, capacity building and training programs will be established through Bagh in order to build capacity of FD and peripheral community stakeholders with commitment to tiger conservation at both the national and local levels.

IR2: Targeted threats to wildlife decreased

Under this IR, Bagh will build national capacity of the FD, community and civil society to respond to wildlife trafficking and engage regional and international bodiesto plug Bangladesh into global efforts to control wildlife trafficking. Also Bagh will conduct activities e.g. effective management of human-wildlife conflict, safety training and emergency treatment supports/options for forest resource collectors that will be achieved by putting the community at the heart of tiger protection. The purpose is to ensure locally-owned solutions for success and sustainability. This will include staffing the teams from villagers and facilitating putting into practice community-born solutions for natural resource management in partnership with FD and CMOs.

IR3: Environmentally sustainable livelihoods improved

One of the most effective ways to sustain the Sundarbans is to diversify the livelihoods with which rely heavily on it for its natural resources. Through a review and SWOT analysis of the current AIG work being conducted, Bagh will identify economically viable, eco-friendly AIG Activities that can be adopted effectively in carefully chosen pilot zones and by specific target groups (e.g. tiger widows) in close consultation with USAID's current relevant projects. To increase its efficacy and long term sustainability plan, Bagh will also work to find and establish investment to eco-friendly AIG Activities through Public Private Partnership (PPP) and current partnerships found within WildTeam and the Smithsonian Institution.

2.4 Selection of performance indicators

Performance indicators specify the data that the project's M&E system will be collecting in order to measure progress and compare actual results over time against what is intended to be achieved. During theselection of Bagh M&E indicators, USAID's general criteria have been followed and ensured that the indicators are useful, measurable, attributable, realistic, time-bound, reliable and direct. These indicators will guide all program decisions and the activities to be implemented, ensuring cost effectiveness and making data verifiable. The Bagh M&E

Plan includes 15 indicators that will be used to monitor progress and manage performance throughout the life of the project at the output, outcome and impact levels. They include three standard Foreign Assistance (F) indicators to facilitate USAID/Bangladesh's roll-up reporting. Finally, in cases where these pre-established F and USAID/Bangladesh indicators do not fully measure progress towardsBaghplanned results, we have included 12custom indicators. Together, these indicators provide a comprehensive measurement of Bagh's objective. Details on each of the indicators including definitions, data sources, and frequency of data collection and reporting can be found in the Performance Indicator Reference Sheets provided in Annex A. A comprehensive list of Baghindicators is presented in Annex B. Indicators have been selected so that Baghdata will be compatible with other USAID and non-USAID projects. For example, indicators have been identified in consultation with USAID, current USAID partners and relevant conservation projects working in the Sundarbans to match and facilitate comparison with those used by other USAID projects. Bagh's technical and M&E staff will work to ensure that, the measurement methods developed by Baghcan accurately be compared or aggregated withdata from other relevant projects such as CREL.

3 Data collection and communication of progress

3.1 Baseline survey and establishment of targets

The Monitoring and Evaluation (M&E) Team will work with Bagh activity staff and similar projects to determine initial baseline values for indicators those used by past (e.g. IPAC) or ongoing (e.g. CREL) projects. The baseline values will be determined by the beginning of quarter 2 in 2015 except research related indicators. To avoid the overlapping of beneficiaries where Bagh is working in similar localities to other projects, separate beneficiaries will be selected prior to implementation, after consulting with the relevant program (e.g. CREL).

The Bagh M&E Specialist will review and lead an assessment to establish updated program baselines for relevant indicators (see Annex C). In some cases this remains as an ongoing process as detailed measurement methods are developed including reviewed and refined targets. As much of the data will be collected in the field through various techniques and by multiple team members, the M&E Specialist will work with each Component's Leader, such as Bagh's Wildlife Technical Specialist (WTS), to identify and ensure implementation of best practices for data collection, as well as to harmonize monitoring, reporting, and verification (MRV) methodologies. The M&E team will set the initial baseline and target for its performance indicators (baseline and target are summarized in a table in Annex C and the individual indicator sheets) in line with Bagh's Annual Work Plan.

3.2 Data collection, processing and analysis

The indicators will be measured regularly throughout the program implementation to determine how the project activities are contributing to change as defined in the Performance Indicator Reference Sheets.

The Bagh M&E team will conduct training sessions for all Bagh staff who will capture M&E data to disseminate the process of data collection, preservation and management starting in quarter 2 of 2015. The frequency of these trainings will first occur monthly in the first quarter of data collections, and then quarterly thereafter, as needed. The M&E team will also use M&E consultants to assist in writing up the training tools and provide support for additional materials required. This will be supplemented by further training as needed, continuous mentoring and learning events which will help ensure that M&E is mainstreamed in the project (Annex G). Data will be collected on monthly, quarterly, half-yearly and yearly basis depending on the Indicator. M&E data will be collected from project stakeholders, project records and other (third party/other than Bagh staff) sources. Data collection methods, sources, frequency and responsible partner organizations for data collection are listed in Annex E. Once the first set of data have been collected, it will be arranged in segments, disaggregated and analyzed to guide project implementation. Where relevant and useful, indicators will be disaggregated by gender, policy, sector, institution, transactional versus foundational issue, and other relevant parameters.

Data processing will follow the data validation, sorting, summarization, aggregation and analyses. For data analyses, Bagh is reviewing web-based project M&E dashboards that permit data to be disaggregated by a multitude of customizable factors where results can be captured and reviewed in real-time. While reviewing these options, Bagh will use Microsoft Excel or Access and Google Forms to standardize the basic tools and information needed to capture results for the project's 15 indicators. With this approach, the M&E team can identify where the most time is being spent in data collection, review and analysis, and therefore where technology can be most impactful, providing insight into the most relevant and useful web-based system required for Bagh's needs. Microsoft Excel and potentially additional tools to be defined will be used for qualitative data management, analysis and communication. Outcome Harvesting2(OH) as an M&E tool (that WildTeam has been using) will be used wherever applicable.

²Outcome Harvesting uses a definition of an outcome derived from the Outcome Mapping methodology - observable changes in the behavior, relationships, activities and actions of individuals, groups, organizations or institutions that were influenced in a small or large way, directly or indirectly, intentionally or not by the project under consideration.

Handheld Global Positioning System (GPS) units for collecting location data on the ground and ArcGIS software to collate thematic layers will be used by the team to plan M&E activities and analyze results. Two types of geographic data will be collected and used: specific activity category and location data. The incorporation of Geographic Information System (GIS) into research and M&E will be based on Bagh's activity records. Bagh M&E system's focus is to define the project scopes, to design conceptual models and spatial maps, to prioritize threats, to develop objectives, to identify and prioritize strategies, to determine indicators to assess the effectiveness of strategies, to develop work plans and budgets, to export data for reports and for recording in the central database where it can be shared with other partners.

3.3 Data quality assurance

Data quality control will be a large part of the feedback loop, with the M&E specialist auditing data robustness on a regular basis and reporting to technical members of the M&E team. Five key data quality standards (validity, reliability, precision, integrity and timeliness) will be used to assure data quality as per USAID guidelines. The Bagh M&E Specialist will be responsible for checking data for quality through regular formal and informal data quality assessments, training and capacity building activities for Bagh staff, and maintaining clear lines of communication from the field to Bagh team leaders, WildTeam and USAID. The M&E Specialist will review the data to look for inconsistencies, outlier values, and other anomalies. Datasheets will be kept for reference and the M&E Officer (data management) will follow up with the data entry person to clarify data anomalies. The Program Officer will enter data into the system, and the Program Coordinator will check the data. The M&E Officer will check the entered data and the M&E Specialist along with WildTeam M&E Coordinator will check at least 10 percent of the data for the transcription error into the system. If any anomalies found then with the support from the Chief of Party (COP)/Deputy Chief of Party (DCOP), the M&E Specialist will take the corrective measures through M&E Officer (data management) who is responsible for the database management system. M&E Officers will also clean minor outlier data³ (if any) both at field (Khulna, regional office) and head quarter (Bagh Dhaka Office) levels into the system.

³In statistics, an *outlier* is a data point that significantly differs from the other data points in a sample. While some outliers should be omitted from data sets because they result from error and/or skew results in ways that are inaccurate or misleading, some outliers should be kept. If, for example, an outlier appears to be genuinely obtained (that is, not the result of error) and/or gives some new insight into the phenomenon being measured, they should not be omitted. Determining outliers and whether they should be omitted and included will be taught to the M&E officers by the M&E Specialist.

The M&E team of Bagh will be aware of the strengths and weaknesses of the data, as determined by applying the five data quality standards and will be aware of the extent to which the data integrity can be trusted to influence management decisions. Mitigating actions against limitations in survey methods are described in Performance Indicator Reference Sheet (PIRS). Bagh will develop an information line to ensure the data quality on a day to day basis outside of the USAID Data Quality Assessments (DQA) (see fig. 5). Internal DQAs will be conducted by M&E team (WildTeam and Bagh) in every six months after M&E plan approval to identify and ensure implementation of best practices for data collection and at each step of integrating monitoring, reporting, and verification methodologies.

USAID Data Quality Assessments (DQAs)

The purpose of a DQA is to ensure that USAID/Bangladesh through Bagh is aware of the strengths and weaknesses of the data collected, as determined by five data quality standards: validity, precision, reliability, integrity and timeliness. DQAs are used to help inform decision-makers on the extent to which the data integrity can be trusted to influence project management decisions.

USAID DQAs will focus on applying the data quality standards and examining the systems and approaches for collecting data to determine whether they are likely to produce reliably high quality data over time. In other words, if the data quality standards are met and the data collection methodology is well designed, then it is likely that good quality data will result. The DQAs will provide processes, protocols, and templates addressing how to:

- Assess the design and implementation of the program's data management and reporting systems
- Trace and verify (recount) data collection processes and systems of indicator results
- Address the DQA findings and implement recommendations.

The Bagh M&E team will align with the USAID's Agency standards for data quality assessments (DQAs). The following data quality standards in the management of data collection and reporting processes:

Validity:The following questions may be asked to ensure that the data clearly andadequately represent the intended result:

- Are the project staff collecting data qualified and properly supervised?
- Are required steps being taken to identify and correct data errors?
- Are necessary steps taken to minimize errors such as sampling, transcription, measurement errors and sample representativeness?
- Has an acceptable level of error been established?
- Are data quality problems clearly described in DQA final reports?

Reliability: Data should reflect stable and consistent collection processes and analysis methods over time, which may need asking the following questions:

- Is the indicator clearly and objectively defined (see PIRS)?
- Is a consistent data collection process used from year to year, location to location, and data source to data source?
- Are there consistent sampling methods or comparable data collection instruments and procedures in place?
- Are data collection and maintenance procedures periodically reviewed and documented in writing?

Timeliness: Data should be available at a useful frequency, should be current, and should be timely enough to influence management decision making. This needs to be ensured by asking the following possible questions:

- Is an appropriate data collection schedule in place?
- Are data sufficiently up to date to be useful to the project implementation?
- Is data properly stored and readily available?

Precision: Data must have a sufficient level of detail to permit management decision making. The margin of error must be less than the anticipated change and so the following questions need to be asked:

- Is there a method for detecting duplicate data?
- Is there a method for detecting missing data?

Integrity:The following questions may be necessary to minimize the risk of transcription error or data manipulation.

- Are there proper safeguards in place to prevent unauthorized changes to the data?
- Is there a system in place to provide independent review of data and results reported?

USAID/Bangladesh will conduct periodic Data Quality Assessment to ensure that Bagh performance indicators meet USAID's data quality standards. DQAs will be completed within six months of M&E Plan approval and at least once every three years. The final schedule will be determined in coordination with the USAID/Bangladesh Agreement Officer's Representative(AOR) and the Baghactivity team.

3.4 Management Information System

To accommodate various data sources, a suitable management information system (Baghonline database) will be developed to easily report on project activities and key result indicators. Besides the online database, Bagh M&E team will also maintaina Bagh M&E data

hub (e.g. MIRADI, MS Access, Excel) for their own record and to cross check data quality. This is necessary to maximize the uses, accessibility, and security of Bagh activity data in a dependable and cost-effective package. Data collected from the field may be linked to spatial imagery, GIS coordinates, digital photos and videos to provide up-to-date data, quick and efficient reporting and immediate analyses of results.

This information will feed into WildTeam's already-established MIRADI M&E system for their records and to maintain their filing system to evaluate conservation practices; Bagh will look into the practical applications of MIRADI for its M&E requirements to see if it's suitable for the project needs as well.

Field assistants will collect, preserve and present data from different Activities and submit to their Program Officers who will then check, verify and report them to the Program Coordinators. Program reports and verified data will then pass to the Bagh M&E team by the Program Coordinators. The Bagh M&E Officer (data management) and the WildTeam M&E Officer will primarily be responsible for coordinating the data collection process, data analysis. The M&E Officers will report to the M&E Specialist. The M&E technical team (COP, DCOP Bagh M&E Specialist and WildTeam M&E Coordinator) will be responsible for data quality control. The M&E technical team will also have the access to view Bagh online database. The M&E Specialist and M&E Officer (data management) will have the access to the Bagh online database for making correction and modification of data if any information is missing or wrong (see fig. 5).

The Bagh M&E team and WildTeam M&E team will align with the USAID's Agency standards for DQAs and will use the data quality standards indicated below to evaluate data quality.

3.5 Data reporting and use

Quarterly reports will be prepared depending on the regular reports collected and collated by the M&E officers during the project period. Updates will be communicated with project components to monitor the implementation and progress towards project indicators and objectives.

Using both quantitative and qualitative methods, Bagh M&E system will focus on questions linked to program design and management decisions to determine whether expected results are being met. Bagh M&E team and reporting systems will spot anomalous outcomes that could result in setbacks or pose unexpected opportunities for replication and scaling up. This will need adaptive management response to make course corrections across components. The M&E Specialist will assist the team to adjust to unexpected outcomes, make strategic decisions, replicate and scale up effective and promising innovations. Open communication

will be maintained between the management staff and the M&E staff, and so the M&E Specialist will communicate results and findings to senior management regularly. On the basis of results and data trends corrective actions will be taken to achieve expected project outcomes and outputs.

Main lessons learned during the project implementation will be shared among Bagh's partners, including USAID and GoB representatives, and local Non-governmental Organizations (NGOs) through regular feedback sessions, training and events. The M&E Specialist will supervise and vet data. Performance monitoring will be integrated into staff training, planning and implementation of project interventions and program management. In this way all staff will have access to and understand how to interpret performance data for results-driven management. This will be supplemented by an ongoing project review process and annual planning workshops to check assumptions and progress. BCAS as Bagh implementing partner will play a key role in the performance monitoring process in order to sustain best practices and ongoing monitoring of key indicators. The USAID's worldwide local capacity building objective will be supported by focusing on local capacity use and development while reducing methodological errors and data quality issues. The importance of monitoring as a mechanism for tiger and its habitat conservation and management will be continuously emphasized. Bagh will comply with all USAID reporting requirements (e.g. quarterly and annual progress reports), in close coordination with the AOR and other USAID technical team members. Each report will be used to assess the progress and rearrange the activity if required to achieve the target.

4 BAGH - M&E organization

The sub-awardee Bangladesh Centre for Advanced Studies(BCAS) is responsible for providing M&E managerial and technical support to the Bagh Activity. In this respect Bagh has permanentlydeployed one M&E Specialist (from BCAS) and two M&E officers (from WildTeam, one for data management and the other for reporting), whichforms the Bagh M&E Team.

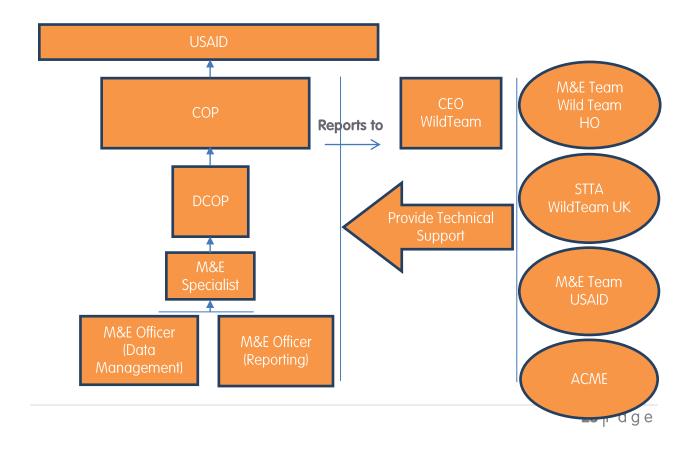
The two M&E Officers, are primarily responsible for coordinating the data collection process, data analysis, and report to the M&E Specialist. The entered data, first, will be checked by M&E Officers and followed by the M&E Specialist to ensure quality of the collected data. Second, to avoid transcription errors, at least 10 percent of the data entered is verified by the M&E Specialist with support from the WildTeam M&E Coordinator. Third, if any errors are found, 100 percent of data will be double checked for errors by the M&E team members. Fourth, The DCOP provides final review of the data, prepares the M&E reportand submits to the COP for any final correction (if required). The COP is the final reviewer and authority in data quality, coordinating with the WildTeam Chief Executive Officer (CEO) for his approval and onward submission of M&E reports to USAID.

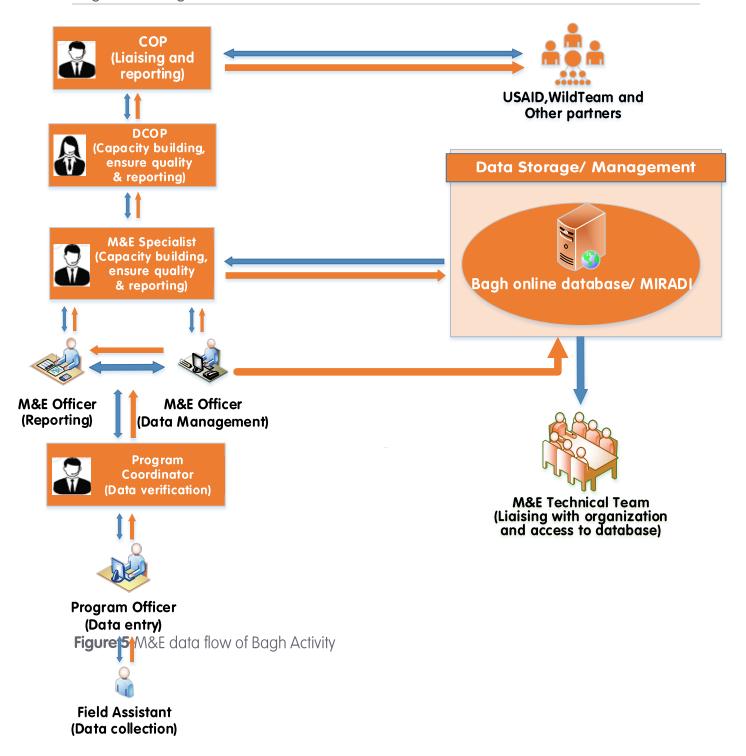
In addition, the Bagh Activity also receives guidance from the M&E team of the WildTeam Head Office(HO), and Short Term Technical Advisors (STTAs). Further technical support is provided by the Accelerating Capacity for Monitoring and Evaluation (ACME) team (a program funded by USAID) to identify and ensure implementation of best practices and to integrate monitoring, reporting, and verification methodologies.

The DCOP, with support from the Bagh M&E team, coordinates all M&E activities on Bagh. The Bagh M&E teamis also responsible for developing and maintaining a Bagh online database, data collection manuals and forms. The project will undertake occasional capacity building support to the M&E by providing them work related training.

The Bagh M&E structure and reporting is shown in the figure 4 and flow of Bagh M&E data is shown in figure 5.

Figure 4:Bagh M&E structure and reporting





5 Evaluation

WildTeam will conduct yearly internal project evaluation based on the performance indicators to review the progress, gaps and re-plan the activities towards the success of the project goal (Annex D). Views from the experts will be collected to assess the project performance. Third party will be involved in the evaluation process.

In alignment with the USAID Evaluation Policy, a performance/ a USAID third party contractor of USAID or its designee will conduct evaluation (s) focused on key implementation issues during the implementation of Bagh. Evaluations will be conducted in line with ADS 203 and the USAID Evaluation Policy of January 2011 and accompanying documents. Such external evaluation(s) may include a detailed review and analysis of the development hypothesis, cause and effect dynamics, project organization, management, field work, significant outputs, and the quality and quantity of overall performance. WildTeam will ensure sufficient planning for the regular collection of data that may be required for different types of evaluation, most likely performance evaluations. While monitoring will provide USAID and the WildTeam with early indications of Bagh's progress, evaluation will provide deeper insight to help stakeholders achieve the intended results. Evaluation will be conducted by USAID in the project mid period or final year (Annex D).

Bagh Moniforing and Evaluation Plan	
Annexes	
Annex A: Bagh Performance Indicator Reference Sheet (PIRS)	

Indicator 1: C1: Relative abundance of tigers in target habitat

Bagh- PERFORMANCE INDICATOR REFERENCE SHEET

USAID/Bangladesh DO 4: Responsiveness to climate change Improved

DO4 IR 4.1:Improved management of natural resources

Bagh Objective: Improved biodiversity conservation in the Sundarbans by protecting the Bengal Tiger

Indicator: Relative abundance of tigers in target habitat

Classification: Indicator 1(Custom indicator # 1), Impact indicator

Is this an annual report indicator? For project year 3 and 4

DESCRIPTION

Precise definition(s)

The relative abundance is a representative index of tiger population in a given location and time compared to other locations. It is derived on the basis of indirect evidences such as tiger tracks as a major evidence of presence of tigers at a certain location. This index could also be calibrated with actual abundance, provided the data about mean daily movement of tigers is available. Occupancy analysis is a robust objective technique that considers the presence-absence data of a species in a sampled area to provide estimates of extent of the total sampled area occupied by the target species, and their relative abundance. Both of these techniques are reliable and replicable mean of monitoring tigers. Camera traps have been used to identify individual tigers using their unique and comparable stripe patterns, and then using this information in capture-recapture frame-work to derive density estimates.

For tiger monitoring, Khal survey and Camera trapping survey will be conducted and the density and relative abundance of tigers will be estimated in the target habitat. The Spatial Capture-Recapture (SCR) model will be used to estimate tiger density. The capture-recapture history will be collected by camera trapping. An Index of tiger track-set (a group of tiger tracks going up or down a khal bank) per km of khal surveyed will be collected using Khal Survey method assuming a positive and significant correlation between tiger track index with tiger density in sampled area. Camera trap survey will be conducted to estimate tiger numbers from the target habitat along with Khal-survey. Tiger density data derived through camera traps would also be used to find out the exact relationship (linear, exponential or accelerated) between the number of tiger track set and tiger density. Khal survey will be conducted in the whole Sundarbans through sampling but Camera trap survey will be conducted only in target habitat due to logistics and operational costs.

Khal survey along with occupancy analysis could also indicate the trend in tiger density and distribution at spatial and temporal scale.

Specific definition

Bagh will conduct research with FD to find out the relative abundance (Khal survey in whole Sundarbans) and density of tigers in target habitat (Camera trap in target habitat).

Unit of measure: Tiger track set/km (Khal survey) and density: number of tiger/100 square Sanctuaries)

Disaggregated by: Location (Sundarbans Ranges, Sanctuaries)

km (Camera trap)

Justification/management utility: Tiger monitoring survey will indicate the health and suitability of Sundarbans Reserve Forests (SRF) for tigers. On the basis of these findings scientifically informed management action drive toward better conservation actions could be taken to conserve Sundarbans and its tigers⁴.

DATA ACQUISITION AND MEASUREMENT PROCESS

Method of data acquisition: Tiger sign survey (Khal), and Camera trap survey

Data source(s): Tiger monitoring survey results (Khal survey and Camera trap survey results)

Frequency/timing of data acquisition: Two field seasons (November 2015 to March 2016, November 2016 to March 2017) for Khal survey. Two field seasons (November 2015 to March 2016, November 2016 to March 2017) for Camera trap survey.

Responsible individual(s): WTS, M&E Specialist, DCOP and COP.

DATA QUALITY ISSUES

Date of initial and future data quality assessment: April 2016 - December 2017

Known data limitation and significance (if any): Tiger sign survey (Khal): variation in degradation rate of tracks due to precipitation, tide, and activities of other species. Need to calculate relationship between tiger track index and tiger density. Need to do a power-analysis to assess the power of yearly Khal-surveys to detect a given change in population density with certain precision.

Camera trap survey in target habitat: Camera trap placement hampered by lack of recognizable tiger travel routes, and other operational issues such as access to tiger habitat situated far-off from the Khals.

Actions taken or planned to address data limitations: Tiger secondary sign survey (Khal): A study on degradation rate of tiger tracks on Khal banks will be conducted. Density estimates derived by camera-trap surveys will be used to calibrate the relative abundance index of tigers. Sampling grid size for occupancy analysis and camera-trap surveys will be determined for Sundarbans by considering the home-range of tigers in Sundarbans.

Camera trap survey in target habitat: Clear paths in forest will be selected and olfactory lures will be used.

PLAN FOR DATA ANALYSIS, REVIEW AND REPORTING

The change in tiger and deer population is one of the aim of the project but is not completely within project control, as Bagh activity represents the efforts of multiple stakeholders responsible for the realisation of this output.

Review and reporting of Data: Annual

OTHER NOTES

Notes on baseline/targets: No reliable baseline information is available on relative abundance of tigers and tiger density in Bangladesh Sundarbans in recent past. The first survey results in April 2016 for Khal survey and Camera trap will be established as baseline. In project year 4 any change in baseline will be reported.

Location of data storage: Bagh online database/MIRADI

TARGETS

	Yl	Y2	Y3	Y4	Total
Target- Khal survey	-	-	tbd	tbd	tbd
Target- Camera trap survey	-	-	tbd	tbd	tbd
Actual- Khal survey			_		
Actual- Camera trap survey					

THIS SHEET LAST UPDATED ON: 15/04/2015

ADDITIONAL RELEVANT DATA (if any)

Indicator 2: C2: Relative abundance of tiger prey species in target habitat

Bagh- PERFORMANCE INDICATOR REFERENCE SHEET

USAID/Bangladesh DO 4: Responsiveness to climate change Improved

DO4 IR 4.1:Improved management of natural resources

Bagh Objective:Improved biodiversity conservation in the Sundarbans by protecting the Bengal Tiger

Indicator: Relative abundance of tiger prey species in target habitat

Classification: Indicator 2(Custom indicator # 2), Impact indicator

Is this an annual report indicator?For project year 3 and 4

DESCRIPTION

Precise definition(s)

The relative abundance is a representative index of tiger prey (spotted deer, barking deer, wild pig, Rhesus macaque)tiger prey population in a given location and time compared to other locations. It is derived on the basis of indirect evidences such as tiger prey tracks as a major evidence of their presence at certain location. This index could also be calibrated with actual abundance provided the data about tiger prey-density is available. Occupancy analysis is a robust objective technique that considers the presence-absence data of a species in a sampled area to provide estimates of extent of the total sampled area occupied by the target species, and their relative abundance. Both of these techniques are reliable and replicable mean of monitoring tiger-prey. Camera traps pictures of prey species at a given station will be used to obtain an index of relative abundance of tiger-prey species that can be compared with other areas.

For tiger-prey monitoring Khal survey and camera trapping survey will be conducted. An Index of tiger prey track-set (a group of tiger prey tracks going up or down a Khal bank) per km of Khal surveyed will be collected using Khal Survey method assuming a positive and significant correlation between tiger prey track index with tiger prey density in sampled area. Camera trap survey will be conducted to obtain tiger preypictures from the target habitat along with Khal-survey. Tiger prey density data derived through line-transacts and camera traps in open and accessible areas (relatively thin and accessible forest patches, and grassland-scrub) would also be used to find out the exact relationship (linear, exponential or accelerated) between the number of tiger prey-track set and tiger prey density. Khal survey will be conducted in the whole Sundarbans but Camera trap survey will be conducted only in target habitat due to logistics and operational costs.

Specific definition

Bagh will conduct surveys with FD to find out the tiger prey occupancy and relative abundance estimates of tiger prey and other tiger-prey in target habitat.

Unit of measure: Tiger prey track set/km (Khal survey), Index of tiger prey pictures obtained by Camera-traps at a sampling grid.

Disaggregated by: Location (Sundarbans Ranges, Sanctuaries)

Justification/management utility: Tiger prey monitoring survey will indicate the health and suitability of Sundarbans Reserve Forests (SRF) for tiger-prey. On the basis of these findings

scientifically informed management action drive toward better conservation actions could be taken to conserve Sundarbans and its tigers.

DATA ACQUISITION AND MEASUREMENT PROCESS

Method of data acquisition: Khal surveys for tiger prey tracks, Camera-tapping to get tiger-prey index, Line transacts in open and accessible areas (relatively thin and accessible forest patches, and grassland-scrub), Pellet count in a few selected sampling blocks to verify its usefulness in estimating tiger prey-population density.

Data source(s): Tiger prey monitoring survey results

Frequency/timing of data acquisition: Two field seasons (November 2015 to March 2016, November 2016 to March 2017) for Khal survey. Two field seasons (November 2015 to March 2016, November 2016 to March 2017) for Camera trap survey.

Responsible individual(s): WTS,M&E Specialist, DCOP and COP.

DATA QUALITY ISSUES

Date of initial and future data quality assessment: April 2016 - December 2017

Known data limitation and significance (if any): Monitoring tiger-prey population and assessment of their density is difficult due to the nature of Sundarbans ecosystem, which gets inundated twice in a day removing any signs. The closed and thick forest makes it difficult to use observation based methods such as distance sampling. Accessibility issue to run a straight line transact is also difficult due to terrain. Other methods, such as pellet counts would also suffer from these same issues.

Actions taken or planned to address data limitations: We plan to pilot test the efficacy of distance-sampling and calibrate track-count and pellet-count based estimates with density estimates obtained by distance sampling in areas, where it's possible.

PLAN FOR DATA ANALYSIS, REVIEW AND REPORTING

Review and reporting of Data: Annual

OTHER NOTES

Notes on baseline/targets: No reliable baseline information available on abundance of tiger-prey in Sundarbans. The first survey results in April 2016 for Khal survey and Camera trap will be established as baseline. In project year 4 any change in baseline will be reported.

Location of data storage: Bagh online database/MIRADI

TARGETS						
	Yl	Y2	Y3	Y4	Total	

Bagh Monitoring and Evaluation Plan

Target- Khal survey	-	-	tbd	tbd	tbd	
Target- Camera trap survey	-	-	tbd	tbd	tbd	
Actual (Khal survey)						
Actual- Camera trap survey						
THIS SHEET LAST UPDATED ON: 15/04/2015 ADDITIONAL RELEVANT DATA (if any)						

Indicator 3: F4.8.2-28: Number of laws, policies, strategies, plans, or regulations addressing climate change (mitigation or adaptation) and/or biodiversity conservation officially proposed, adopted, or implemented as a result of USG assistance

Bagh-PERFORMANCE INDICATOR REFERENCE SHEET

USAID/Bangladesh DO 4: Responsiveness to climate change Improved

DO4 Sub-IR 4.1.3: Strengthened legal and policy framework

Bagh IR1: Wildlife conservation practices

improved

Bagh IR2: Targeted threats to wildlife decreased

Bagh IR3: Environmentally sustainable

livelihoods improved

Indicator:Number of laws, policies, strategies, plans, or regulations addressing climate change (mitigation or adaptation) and/or biodiversity conservation officially proposed, adopted, or implemented as a result of USG assistance

Classification: Indicator 3 (Standard indicator # 1, F4.8.2-28), Output indicator

Is this an Annual Report Indicator? Yes, annual

DESCRIPTION

Precise definition(s)

According to USAID DO4, to qualify policies, laws, strategies, plans, agreements, and/or regulations must be adopted or improved (e.g. approved/passed/put into practice/revised for implementation) at the regional, sub-regional, and/or national levels to address biodiversity conservation issues. In order for a law, policy, or regulation to be 'adopted', evidence must be verifiable as a matter of public record and must include: policy, date adopted/passed, individuals or organizations involved, and the implications of the policy for biodiversity conservation.

"Officially proposed" means that a relevant government official or agency with decision-making authority has proposed the measure publicly. Each piece of legislation can be counted once as "proposed" and once as "adopted," if applicable.

"Adopted" means officially codified or enacted by the national government entity with decision making authority in their national legal, regulatory, or policy system.

Laws, policies, strategies, plans, and regulations that address biodiversity conservation may be integrated in scope (e.g., at a certain spatial scale or political boundary such as state, or national), or may address sectors, such as water, marine resources, forests, land use and agriculture, trade, education. It is essential that the indicator narrative explain the connection between the measure and biodiversity.

The narrative should be specific about what the reported number represents, particularly:

- What is the title of the measure?
- At what stage is it? (officially proposed or adopted)
- What is/are the institution(s) that will be implementing and/or enforcing the measure?

How does the measure contribute to biodiversity conservation?

Specific definition

Bagh will set a baseline by first quarter of 2015 for this indicator comprising of existing relevant laws, policies, regulations, agreements, protocol and guidelines and those gaps or needs to be considered in the project along with their current status.

Laws, policies, strategies, plans, regulations, agreements, protocol and guidelines will be counted when Bagh activity will facilitate technical backstopping and advice for policy analysis, drafting or revising policies, laws, regulations, agreements, protocol and guidelines at the national and regional levels during the life of the project. Policies, laws, agreements, regulations, protocoland guidelines may contribute to addressing Bangladesh Tiger Action Plan (BTAP), natural resource management strategy, biodiversity conservation strategy, ecotourism master plan, anti-trafficking action plan.

At the local level, if guidelines, protocol, policies, regulations and stewardship agreements are formally passed that empower and support VTRTs, joint patrolling groups to conserve, protect and manage Sundarbans resources, those may be counted. Information on the name and intent of each policy action and guideline reported under this indicator will be included in the narrative section of Bagh progress reports.

Unit of measure:Number of laws, policies, strategies, plans, regulations, agreement, protocol and guidelines

Disaggregated by:Category (laws, policies, strategies, plans, regulations, agreement, protocol, and guidelines)

Stages of development (analyzed, drafted, proposed, accepted, adopted, and implemented)

Justification/management utility: More appropriate laws, policies, strategies, plans, agreements, protocol and regulations indicates a greater commitment to biodiversity conservation through the Forest Department and relevant stakeholders (e.g. local community organizations, private sector partners). This leads to a more enabling environment for Sundarbans. An improved enabling environment through strategy development and planning is essential to ensure that efforts and investments in biodiversity conservation have legal and strategic support.

DATA ACQUISITION AND MEASUREMENT PROCESS

Method of data acquisition: Bagh M&E team will set a baseline through consultation with component leaders.

Policy processes and/or guidelines will be tracked through regular contact with key stakeholders involved, and through minutes of relevant meetings and committees. Evidence to support reporting by stage attained in formalizing laws, policies, strategies, plans, regulations, agreement, protocol and guidelines will be compiled (such as reports, consultation minutes, etc.). The team will obtain copies of the relevant documents including parliamentary proceedings, government agency policy memos, minutes of policy committee meetings, official gazette notifications, published laws and regulations, and guidelines.

Data source(s):Project reports, meeting minutes, consultation minutes and reports, copies of the relevant documents including parliamentary proceedings, government agency policy memos, minutes of policy committee meetings, official gazette notifications, approved policy documents and other official documentation, published laws, policies, strategies, plans, regulations, agreement, protocol and guidelines

Frequency/timing of data acquisition: Quarterly

Responsible individual(s): Component leaders, M&E Specialist, DCOP and COP.

DATA QUALITY ISSUES

Date of initial and future data quality assessment:Internal DQAs will be conducted by M&E team (WildTeam and Bagh) every six months after M&E plan approval (June 2015 - December 2017)

Known data limitation and significance (if any):

Timeliness: Revision of policies and laws is a lengthy process and it requires time, investment, political stability and will, etc. that can be outside the control of Bagh and the implementing partners.

Precision: This indicator captures progress made along the way in terms of convening stakeholders, drafting, approving, and starting implementation of laws, policies, strategies, plans, regulations, agreement, protocol and guidelines; but not enforcement. Narrative is critical for interpreting this indicator.

Actions taken or planned to address data limitations: Timeliness: Bagh team will track the progresses of identified laws, policies, strategies, plans, regulations, agreement, protocol and guidelines by stage and willcollect relevant documents and records for reporting the indicator.

Precision: This indicator clearly states that it measures laws, policies, strategies, plans, regulations, agreement, protocol and guidelines that have been formallyproposed, passed, and/or implemented (disaggregated by the five stages). There is no expectation that the indicator measures enforcement. Understanding the progress qualitatively through engagement with government and the implementing partners is required.

PLAN FOR DATA ANALYSIS, REVIEW AND REPORTING

Review and reporting of data:Annual

OTHER NOTES

Notes on baseline/targets: Baseline is zero and target will be developed by the first guarter of 2015.

Location of data storage:Bagh online database/MIRAD

TARGETS

	Y1	Y2	Y3	Y4	Total
Target	-	tbd	tbd	tbd	tbd
Actual					

THIS SHEET LAST UPDATED ON:15/04/2015

Indicator 4: C3: Percentage of individuals with increased knowledge in community groups on wildlife conservation

consorvation					
Bagh- PERFORMANCE INDICATOR REFERENCE SHEET					
USAID/Bangladesh DO 4: Responsiveness to climate change Improved					
DO4Sub-IR 4.1.1:Enhanced capacity for key	Bagh IR1: Wildlife conservation practices				
stakeholders	improved				
Sub-IR 1.2: Increased knowledge base on					
wildlife conservation					
Indicator:Percentage of individuals with increased	knowledge in community groups on wildlife				

conservation

Classification: Indicator 4 (Custom indicator # 3), Outcome indicator

Is this an annual report indicator? Yes, annual

DESCRIPTION

Precise definition(s)

Increased knowledge will be measured after the capacity building programs/events (e.g. training) focused on wildlife conservation.

Specific definition

Bagh will assess the knowledge level of trained people from community groups on wildlife conservation.

Knowledge on wildlife conservation will include knowledge on role of tigers and wildlife, role of Sundarbans, tiger biology, wildlife act and laws, wildlife rescue and management, action during human wildlife conflict situation, sustainable forest resource collection and role in forest resource management.

Unit of measure: Percentage of individuals with	Disaggregated by: Gender, group category
increased knowledge	(VTRT, BaghBondhu, forest resource collectors)

Justification/management utility: Increased knowledge among the targeted trained people will raise community level awareness and empower them to actively participate in conservation of natural resources upon which they depend. It will also motivate them to work for wildlife conservation.

DATA ACQUISITION AND MEASUREMENT PROCESS

Method of data acquisition: Data will be collected through knowledgesurvey. A checklist to assess the knowledge level on wildlife conservation will be developed and quarterly data will be collected following the checklist using random sample survey with the training participants. Pre and post evaluation of knowledge will also be conducted in each training. Outcome Harvesting tool will also be used to measure data and outcomes.

The following formula will be used to measure this indicator:

Percentage of individuals with increased knowledge = (No. of training participants with increased knowledge based on pre and post evaluation scoring)/ Total number of training participants) x100

Data source(s): Knowledge survey report, individual knowledge survey checklist

Frequency/timing of data acquisition: Quarterly

Responsible individual(s): M&E Specialist, DCOP and COP.

DATA QUALITY ISSUES

Date of initial and future data quality assessment: Internal DQAs will be conducted by M&E team (WildTeam and Bagh) in every six months after M&E plan approval (June 2015- December 2017)

Known data limitation and significance (if any): One person (e.g. a forest resource collector) may participate in same training (same training topic) in different regions and hence the individual's knowledge level can be overestimated.

Only knowledge level data don't show the outcome of the Bagh activities.

Actions taken or planned to address data limitations: To avoid the overestimation each trainee for the same topic training will be tracked by the training attendance sheet. Also each trainee will be provided unique identification number (e.g. national ID number of household head, Bagh ID, mobile number) so that easy tracking can be ensured.

Bagh will analyze what influenced the individuals to be involved with Bagh activities, how the individuals are using their increased knowledge to wildlife conservation, how their increased knowledge contribute to the outcomes.

PLAN FOR DATA ANALYSIS, REVIEW AND REPORTING

Review and reporting of data: Annual

OTHER NOTES

Notes on baseline/targets: Baseline will be developed by end of April 2015. To set the baseline, a random sample survey through a knowledge survey checklist will be conducted with the target community groups (see above under "Disaggregated by"). The target made for this indicator will be increased over the baseline.

Location of data storage: Bagh online database/MIRADI

TARGETS

	Y1	Y2	Y3	Y4	Total
Target (knowledge)	-	10%	10%	10%	30%
Actual (knowledge)					

THIS SHEET LAST UPDATED ON: 15/04/2015

Indicator 5: C4: Number of individual activities conducted by community groups (VTRTs, *BaghBondhu*) for wildlife conservation

Bagh- PERFORMANCE INDICATOR REFERENCE SHEET

USAID/Bangladesh DO 4: Responsiveness to Climate Change Improved

DO4 Sub-IR 4.1.2: Strengthened resource management systems

Bagh IR 1: Wildlife conservation practices

improved

Indicator: Number of individual activities conducted by community groups (VTRTs, *BaghBondhu*) for wildlife conservation

Classification: Indicator 5 (Custom indicator # 4), Outcome indicator

Is this an Annual Report Indicator? Yes, annual

DESCRIPTION

Precise Definition(s):

For improved governance of natural resource and biodiversity it needs to be taken initiatives by the local community people or groups. This indicator measures the number of individual activities done by community groups (VTRTs and *BaghBondhu*).

Specific Definition:

Bagh will count the number of individual activities by the community groups (VTRTs and BaghBondhu). Individual activities e.g. commitment session, wildlife rescue operations, patrollingthe tiger stray out situation, social meetingspublication/newsregarding wildlife conservation will be considered under this indicator. Also Bagh will analyze what influenced people to participate in community group activities, what was the relative contribution of USAID-funded activities and other actors and factors, and these activities contributing to what outcomes.

Unit of Measure: Number of individual activity

Disaggregated by: Group category(VTRT, BaghBondhu)

Justification/Management Utility: For improved environmental governance it is necessary to have initiatives from local community people in biodiverse areas. Bagh will support capacity building and awareness raising, including communication activities, but how these activities influence them to take initiative that will be assessed under this indicator.

DATA ACQUISITION AND MEASUREMENT PROCESS

Method of Data Acquisition: Activity & output tracking and Outcome Harvesting tool will be used. Focus Group Discussion (FGD) will be conducted with groups to collect data. Case study will also be conducted.

Data Source(s): Project reports, meeting minutes, FGD report, case study report, individual activity reporting/tracking sheet

Frequency/Timing of Data Acquisition: Quarterly

Responsible individual(s): M&E Specialist, DCOP and COP.

DATA QUALITY ISSUES

Date of Initial and Future Data Quality Assessment: Internal DQAs will be conducted by M&E team (WildTeam and Bagh) in every six months after M&E plan approval (June 2015 - December 2017)

Known Data Limitation and Significance (if any): Duplication of an activity record.

Improper documentation of field data.

Actions taken or Planned to Address Data Limitations: Cross check the activity from different person or group. Report tracking sheet with time and activity details will be maintained. Hard copy documentation and paper trail will be ensured.

Training to the data collector on data collection tools, methodology with guideline and proper documentation of field data.

PLAN FOR DATA ANALYSIS, REVIEW AND REPORTING

Review and Reporting of Data: Annual

OTHER NOTES

Notes on Baseline/Targets: Baseline is 1,300 (2014 data of WildTeam)

Location of Data Storage: Bagh online database/MIRADI

TARGETS

	Yl	Y2	Y3	Y4	Total
Target	-	1,300	1,400	1,500	4,200
Actual					

THIS SHEET LAST UPDATED ON: 15/04/2015

Indicator 6: F4.8.1-29: Number of person hours of training in natural resources management and/or biodiversity conservation supported by USG assistance

Bagh- PERFORMANCE INDICATOR REFERENCE SHEET

USAID/Bangladesh DO 4: Responsiveness to Climate Change Improved

DO4 Sub-IR 4.1.1:Enhanced capacity for key stakeholders

Bagh IR 1: Wildlife conservation practices improved

Sub-IR 1.1: Enhanced capacity to adopt wildlife conservation practices

Indicator:Number of person hours of training in natural resources management and/or biodiversity conservation supported by USG assistance

Classification: Indicator 6 (Standard indicator # 2, F 4.8.1-29), Output indicator

Is this an Annual Report Indicator? Yes, annual

DESCRIPTION

Precise Definition(s):

This indicator uses the following equation to express the number of United States Government (USG)-supported training hours that were completed by training participants: Hours of USG supported training course x Number of people completing that training course with thesupport from the USG: This indicator counts training hours that were delivered in full or in part as a result of USG assistance. This assistance could include provision of funds to pay teachers, provide facilities, transportation, specialized equipment/supplies, or other key contributions necessary to ensure that the training was successfully organized. This indicator does not automatically count any course for which the USG helped develop the curriculum, but rather focuses on delivery of courses that was made possible through full or partial funding from the USG.

People: Only people who complete the entire training course are counted for this indicator.

Training:Training is defined as sessions in which participants are educated according to a defined curriculum and set learning objectives. The transfer of this knowledge, skills or aptitudes may occur through long-term academic programs, long-term or short-term technical courses, non-academic seminars, workshops, verifiable online courses, or courses in the field. Sessions that could be informative or educational, such as meetings, but do not have a defined curriculum or learning objectives are not counted as training.

Natural resources and biodiversity is defined as conserving biodiversity and managing natural resources in ways that maintain their long-term viability and preserve their potential to meet the needs of present and future generations.

Specific Definition: Bagh will provide training to various stakeholders (FD personnel, CMOs, VTRTs,

forest resource collector, civil society, students, teachers, researchers, etc.) on the following issues: i. natural resource management and biodiversity conservation, ii. Monitoring and management of wildlife trafficking, iii. institutional capacity building and climate resilient livelihood.

Pre andpost training test will be conducted where appropriate to assess changes in knowledge, attitude and practices. Individuals will be counted upon completion of trainings (single event or a series of orientations).

Unit of Measure: Number of person hours

Disaggregated by: Gender, category of organization/groups

Justification/Management Utility: This indicator provides information about the reach and scale of tiger conservation and habitat management training and skill development efforts.

DATA ACQUISITION AND MEASUREMENT PROCESS

Method of Data Acquisition: Performance monitoring data will be collected using activity and output tracking tool (participant training report forms for all participants). Indicator will be calculated as the number of people participating in each scheduled training event as per project requirement. Pre and post evaluation will be conducted to assess the knowledge of the participants. To assess the quality of training, evaluation will be conducted at the end of the training. The following formula will be used to measure the indicator.

(Instruction hours of USG supported training) **x** (Number of people completing each training)= Person hours of training supported by USG assistance.

Data Source(s): Training plan and reports, project reports, evaluation reports

Frequency/Timing of Data Acquisition: Quarterly

Responsible individual(s): M&E Specialist, DCOP and COP.

DATA QUALITY ISSUES

Date of Initial and Future Data Quality Assessment:Internal DQAs will be conducted by M&E team (WildTeam and Bagh) in every six months after M&E plan approval (June 2015 - December 2017)

Known Data Limitation and Significance (if any): One person (e.g. a forest resource collector) may participate in same training (same training topic) in different regions and hence the person hours can be overestimated.

Lack of coordination among different workstreams may hamper the proper reporting.

This indicator measures only the number of person hours trained but not the quality of training.

Actions taken or Planned to Address Data Limitations:

To avoid doublecounting each trainee for the same topic training will be tracked by the training attendance sheet and unique ID for each participant

Ensure proper coordination among the Bagh teams and quality reporting.

After completion of each training an evaluation will be conducted to assess the quality of training.

PLAN FOR DATA ANALYSIS, REVIEW AND REPORTING

Review and Reporting of Data: Quarterly

OTHER NOTES

Notes on Baseline/Targets: Baseline is zero. The target will be set by the first quarter of 2015

Location of Data Storage: Bagh online database/MIRADI

TARGETS

	Y1	Y2	Y3	Y4	Total
Target	-	tbd	tbd	tbd	tbd
Actual					

THIS SHEET LAST UPDATED ON: 04/02/2015

Indicator 7: C5: Number of priority research studies conducted for better understanding of Sundarbans ecosystem.

Bagh-PERFORMANCE INDICATOR REFERENCE SHEET

USAID/Bangladesh DO 4: Responsiveness to climate change Improved

DO4Sub-IR 4.1.2:Strengthened resources management systems

Bagh IR1: Wildlife conservation practices improved

Sub-IR 1.2: Increased knowledge base on wildlife conservation

Indicator: Number of priority research studies conducted for better understanding of Sundarbans ecosystem.

Classification: Indicator 7 (Custom indicator # 5), Output indicator

Is this an annual report indicator? For project year 3 and 4

DESCRIPTION

Precise definition(s)

Priority research studies are outcome of four consultative workshops (Threat Assessment, Human-Tiger Conflict Mitigation Guidelines, Prioritization of Research Agenda, Wildlife and Habitat Monitoring) held in consultation with the Bangladesh Forest Department (FD) and other stakeholders from community.

Specific definition

Bagh will develop a research priority agenda under Bagh activity with FD and select a few of them (based on their relative importance to conserve and maintain the integrity of Sundarbans) for indepth research. The prioritywill be decided by threat assessment and their ranking. Bagh will then conduct these studies in field with its in-house staff or with the help of STTAs.

Unit of measure: Number of research studies conducted.

Disaggregated by: Category of research (threat assessment, wildlife and habitat monitoring, social research)

Stages of research (planning, data collecting, analyzing, drafting, and final reporting)

Justification/management utility: Priority research findings will support the wildlife conservation interventions and help in management decision/actions to protect Sundarbans

DATA ACQUISITION AND MEASUREMENT PROCESS

Method of data acquisition: Data will be collected fromResearch and Monitoring Team and will be cross checked with FD. Research report will be checked. Priority research tracking sheet will be maintained. Different stages (planning, data collecting, analyzing, drafting, and final reporting) of research data will also be collected and documented.

Data source(s): Research reports/documents, project reports, priority research tracking sheet

Frequency/timing of data acquisition: Quarterly

Responsible individual(s): WTS, M&E Specialist, DCOP and COP

DATA QUALITY ISSUES

Date of initial and future data quality assessment: Internal DQAs will be conducted by M&E team (WildTeam and Bagh) in every six months after M&E plan approval (June 2016 - December 2017)

Known data limitation and significance (if any): Insufficient quantitative objective data in reports (data in previous reports).

Limited fund pool allocated for research and technical expertise are additional limitations.

Actions taken or planned to address data limitations:For most of the research, we do not have baselines until we commence the research under Bagh. Additionally, we have a breadth of different types of research, requiring different standards. Bagh's WTS will mitigate risk by using known scientific standards and sampling and analytical methodology.

Bagh will prioritize research in collaboration with USAID and stakeholders (through the Annual Work Plans) based on -Bagh focus and objectives and availability of funds.

PLAN FOR DATA ANALYSIS, REVIEW AND REPORTING

Review and reporting of data: Annual

OTHER NOTES

Notes on baseline/targets: Baseline is zero

Location of data storage: Bagh online database/MIRADI

TARGETS

	Y1	Y2	Y3	Y4	Total
Target	-	-	5	5	10
Actual					

THIS SHEET LAST UPDATED ON: 15/04/2015

Indicator 8: C6: Number of hectares of biological significance and/or natural resources under improved natural resource management

Bagh- PERFORMANCE INDICATOR REFERENCE SHEET

USAID/Bangladesh DO 4: Responsiveness to climate change improved

DO4 IR 4.1:Improved management of natural resources

Bagh Objective: Improved biodiversity conservation in the Sundarbans by protecting the Bengal Tiger

IR 2: Targeted threats to wildlife decreased

Indicator:Number of hectares of biological significance and/or natural resources under improved natural resource management

Classification: Indicator 8 (Custom # 6), Outcome indicator

Is this an annual report indicator? Yes, annual

DESCRIPTION

Precise definition(s)

"Improved natural resource management" includes activities that promote enhanced management of natural resources for one or more objectives, such as conserving biodiversity, sustaining soil or water resources, mitigating climate change, and/or promoting sustainable agriculture.

Management should be guided by a stakeholder-endorsed process following principles of sustainable NRM and conservation, improved human and institutional capacity for sustainable NRM and conservation, access to better information for decision-making, and/or adoption of sustainable NRM and conservation practices. An area is considered under "improved management" when any one of the following occurs: management planning and actions are informed by local site assessments, stakeholder participation and other best management practices; human and institutional capacity is developed; management actions are implemented; ongoing monitoring and evaluation is established; adaptive management is demonstrated; or on-the-ground management impacts are demonstrated (e.g. illegal roads closed, snares removed, no-fishing zones demarcated). Reported as total number of hectares improved during the fiscal year in question, which can include maintained improvement in previously reported hectares and/or new, additional hectares.

Specific definition

Biological significance and/or natural resources under improved natural resource managementwill beconsidered when the natural resources under improved protection through patrolling coverage in the Sundarbans Reserved Forest (SRF) area will be ensured.

Unit of measure: Hectares (ha)

Disaggregated by: Location (Sundarbans Ranges)

Justification/management utility: This indicator measures the impact of Bagh interventions on the biophysical conditions of targeted areas of high biodiversity, as a consequence of the effective implementation of improved tiger conservation practices that help to restore and improve ecosystems, reduce human pressure on these resources, and/or directly conserve fauna and flora.

DATA ACQUISITION AND MEASUREMENT PROCESS

Method of data acquisition: Patrolcoverage inside forest data will be collected from Anti-trafficking Action workstream. Data will be collected in square kilometer and during analysis it will be converted to hectares i.e., 1 sq. km = 100 hectare.

Data source(s): Project reports, hectare coverage tracking sheet, map

Frequency/timing of data acquisition: Quarterly

Responsible individual(s): M&E Specialist, DCOP and COP.

DATA QUALITY ISSUES

Date of initial and future data quality assessment: Internal DQAs will be conducted by M&E team (Bagh and WildTeam) in every six months after M&E plan approval (June 2015 - December 2017)

Known data limitation and significance (if any): Patrolling in a particular area for several times may create duplication in hectare coverage data.

Actions taken or planned to address data limitations:An area coverage will be considered once and will not be double counted. Cumulative figure will be considered in the target as well as in achievement.

PLAN FOR DATA ANALYSIS, REVIEW AND REPORTING

Review and reporting of data: Yearly

OTHER NOTES

Notes on baseline/targets: Baseline is zero

Location of data storage: Bagh online database/MIRADI

TARGETS

	Yl	Y2	Y3	Y4	Total
Target	-	40,000	120,000	182,664	182,664
Actual					

THIS SHEET LAST UPDATED ON: 15/04/2015

Indicator 9: C7: Number of joint community patrolling groups functioning

Bagh- PERFORMANCE INDICATOR REFERENCE SHEET

USAID/Bangladesh DO 4: Responsiveness to climate change Improved

DO4 IR 4.1.2:Strengthened resource management systems

Bagh IR 2: Targeted threats to wildlife decreased

Sub-IR 2.1:Improved law enforcement and monitoring to reduce wildlife trafficking

Indicator: Number of jointcommunity patrolling groups functioning

Classification: Indicator 9 (Custom indicator #7), Outcome indicator

Is this an Annual Report Indicator? Yes, annual

DESCRIPTION

Precise definition(s)

Volunteer Village Tiger Response Teams (VTRTs) and Co-management Organization (CMO) representatives of local community can play an important role in law enforcement in the periphery of Sundarbans through joint patrolling and social pressure. Presently, there are 49 VTRTs with 350 youth members, and 1 Forest Tiger Response Team (FTRT) with 3 youth members. 209 Village conservation forum (VCF) were developed under IPAC (now CREL) and in some cases VTRT members are members of VCFs as well.

Joint community patrolling model will be designed, piloted and evaluated in selected border unions of Sundarbans. Selected villages will be piloted for community-born solutions that increase social pressure on the poachers of tiger and deer, and illicit tree fellers.

'Joint community patrolling group' will be formed with participation from Co-management Organizations (CMOs), and Village Tiger Response Team (VTRT)which is an effective measure to reduce the wildlife trafficking.

Specific definition

Bagh will measure the number of joint community patrolling group functioning in adjacent community in Sundarbans to reduce wildlife trafficking. The term 'functioning' is described as when the group conductsjoint patrolling as per Target. The joint patrolling will be successful through the following criteria: patrol as per target, regular meetings (e.g. once in a month), report to FD and Bagh team on wildlife crime information when available.

Unit of measure: Number of jointcommunity patrolling groups functioning

Disaggregated by: Location (Sundarbans Ranges)

Justification/management utility: Piloting of community joint patrolling model and establishing patrolling group will strengthen frontline law enforcement within the communities around the Sundarbans.

DATA ACQUISITION AND MEASUREMENT PROCESS

Method of data acquisition: Activity & output tracking and Outcome Harvesting tool will be used. Also the performance or 'functioning' criteria will be analyzed based on the criteria/checklist will be set for joint patrolling group.

Data source(s): Project reports, patrolling group performance tracking sheet

Frequency/timing of data acquisition: Quarterly

Responsible individual(s): M&E Specialist, DCOP and COP.

DATA QUALITY ISSUES

Date of initial and future data quality assessment: Internal DQAs will be conducted by M&E team (WildTeam and Bagh) in every six months after M&E plan approval (June 2015 - December 2017)

Known data limitation and significance (if any): This indicator only measures the number of community joint patrol group and therefore less focused on the performance of the groups.

Actions taken or planned to address data limitations: Outcome harvesting/survey will be conducted with the groups to assess their performance. This information will supplement the overall report. Patrolling group performance tracking sheet will also be maintained.

PLAN FOR DATA ANALYSIS, REVIEW AND REPORTING

Review and reporting of data: Annual

OTHER NOTES

Notes on baseline/targets: Baseline is zero

Location of data storage: Bagh online database/MIRADI

TARGETS

	Y1	Y2	Y3	Y4	Total
Target	0	0	2	4	6
Actual					

THIS SHEET LAST UPDATED ON: 15/04/2015

Indicator 10: C8: Number of patrols conducted inside forest

Bagh- PERFORMANCE INDICATOR REFERENCE SHEET

USAID/Bangladesh DO 4: Responsiveness to climate change Improved

DO4 Sub-IR 4.1.2:Strengthened resource management systems

Bagh IR 2: Targeted threats to wildlife decreased

Sub-IR 2.1:Improved law enforcement and monitoring to reduce wildlife trafficking

Indicator: Number of patrols conducted inside forest

Classification: Indicator 10 (Custom indicator #8), Output indicator

Is this an Annual Report Indicator? Yes, annual

DESCRIPTION

Precise definition(s)

Bangladesh Forest Department (FD) and Bagh will jointly conduct patrolling inside forest which is an effective measure to reduce the wildlife trafficking. For the inside forest patrolling, Bagh will provide logistics support (patrol boat, manpower, GPS, torch and night vision goggles) to FD. Each boat will patrol during approximately 15 days, effectively patrolling during one month by utilizing two boats. This will ensure continuous presence of the patrolling teams in the target areas (Satkhira range and the West Sanctuary); a customized patrolling schedule will be produced before starting of each patrol.

Specific definition

Bagh will measure the number of patrols conducted inside forest by FD and Bagh to reduce wildlife trafficking. The performance of the patrolling group will be assessed based on the access of logistics support (patrolling devices e.g. patrol boat, GPS, torch and night vision goggles); regular meetings (e.g. once in a month) and patrolling as per target.

Unit of measure: Number of patrols conducted Disaggregated by: Location (Sundarbans Ranges)

Justification/management utility: Inside forest patrolling will contribute to reduce wildlife crime inside forest through gathering data, data analysis and actions based on the data.

DATA ACQUISITION AND MEASUREMENT PROCESS

Method of data acquisition: Activity and output tracking tool will be used. Also the performance of patrol groupswill be analyzed based on the criteria/checklist will be set for the patrolling group.

Data source(s): Project reports, patrolling group performance tracking sheet

Frequency/timing of data acquisition: Quarterly

Responsible individual(s): M&E Specialist, DCOP and COP.

DATA QUALITY ISSUES

Date of initial and future data quality assessment: Internal DQAs will be conducted by M&E team (WildTeam and Bagh) in every six months after M&E plan approval (June 2015 - December 2017)

Known data limitation and significance (if any): This indicator only measures the number of patrol conducted and therefore less focused on the performance of the groups.

Actions taken or planned to address data limitations: Outcome harvesting/survey will be conducted with the groups to assess their performance. This information will supplement the overall report. Patrolling group performance tracking sheet will also be maintained.

PLAN FOR DATA ANALYSIS, REVIEW AND REPORTING

Review and reporting of data: Annual

OTHER NOTES

Notes on baseline/targets: Baseline is zero

Location of data storage: Bagh online database/MIRADI

TARGETS

	Y1	Y2	Y3	Y4	Total
Target	0	6	12	12	30
Actual			-		

THIS SHEET LAST UPDATED ON: 15/04/2015

Indicator 11: C9: Number of forest resource collectors applying safety measures

	a consciore apprying sarery measures
Bagh- PERFORMANCE INDICATOR REFERENCE	CE SHEET
USAID/Bangladesh DO4: Responsiveness to	o climate change improved
DO4 IR 4.1.1: Enhanced capacity of key stakeholders	Sub-IR 2.2:Improved management to decrease human-wildlife conflict
Indictor:Number of forest resource collect	tors applying safety measures

Classification: Indicator 11 (Custom indicator # 9), Outcome indicator

Is this an annual report indicator? Yes,annual

DESCRIPTION

Precise definition(s)

Forest resource collectors (e.g., honey collectors, fish/shrimp fry collectors, fish collectors, crab collectors, Golpata – Nypafruticans collectors, wood/firewood collectors) who have legal permission to extract forest resources will be provided training on safety measures and their responsibilities (the dos and don'ts) inside forest. These training will also help them to learn important tips on the first aid training and equipment/support as well as the way of sustainable forest resource collection.

Specific definition

Bagh will assess how many forest resource collectors apply safety measures and training knowledge on sustainable forest resource collection under the Bagh activity. Types of safety measures include collecting in a group and carrying forest entry permission document(s), first aid box, mask, drum, blank shooter, torch, whistle, big sticks, bee keeper's hat,etc.

Bagh will also assess what influences forest resource collectors to use safety measures, what is the relative contribution of USAID-funded activities and other actors and factors, what outcomes aresafety measures contributing to, how did forest resource collectors safety measures activities contribute to outcomes, what other actors and factors contributed to outcomes and what was the significance of these outcomes.

Unit of measure: Number of forest resource	Disaggregated by: Stakeholder group, gender,
collectors	Sundarbans Ranges, new and continuous users

Justification/management utility: Applying safety measures by the forest resource collectors will help to mitigate the consequences of tiger/wildlife (e.g. crocodile, snake) attacks.

DATA ACQUISITION AND MEASUREMENT PROCESS

Method of data acquisition: Data will be collected after the training to measure the outcome of training and application of safety measures through the performance survey, Outcome Harvesting method will also be used. Bagh will conduct quarterly monitoring "checklists" to determine forest resource collectors' applicable use of the safety measures training techniques. These checklists will be based on the objectives and criteria of the safety training guidelines presented to the forest resource collectors through Bagh.

Data source(s): Project reports, survey reports

Frequency/timing of data acquisition: Quarterly

Responsible individual(s): M&E Specialist, DCOP and COP.

DATA QUALITY ISSUES

Date of initial and future data quality assessment: Internal DQAs will be conducted by M&E team (WildTeam and Bagh) in every six months after M&E plan approval (June 2015 - December 2017)

Known data limitation and significance (if any): Tracking the trainees after the training

Actions taken or planned to address data limitations: Information on each trainee will be collected during the training and the info will be updated quarterly through communication.

PLAN FOR DATA ANALYSIS, REVIEW AND REPORTING

Review and reporting of data: Quarterly

OTHER NOTES

Notes on baseline/targets: Baseline is zero

Location of data storage: Bagh online database/MIRADI

TARGETS

	Yl	Y2	Y3	Y4	Total
Target	-	300	350	350	1,000
Actual					

THIS SHEET LAST UPDATED ON: 15/04/2015

Indicator 12: C10: Percentage of human-wildlife conflict incidences effectively managed

Bagh- PERFORMANCE INDICATOR REFERENCE SHEET

USAID/Bangladesh DO 4: Responsiveness to climate change Improved

DO4 IR 4.1:Improved management of natural resources

Bagh IR 2: Targeted threats to wildlife decreased

Sub-IR 2.2:Improved management to decrease human-wildlife conflict

Indicator: Percentage of human-wildlife conflict incidences effectively managed

Classification: Indicator 12 (Custom indicator # 10), Outcome indicator

Is this an annual report indicator? Yes, annual

DESCRIPTION

Precise definition(s)

This indicator will measure the percentage of human-wildlife conflict incidences effectively managed in the areas of Sundarbans managed under Bagh.

Specific definition

Bagh will support FD, FTRTand VTRTs to manage human-wildlife conflict incidence and collect data on it. Also Bagh will assess the management quality of human-wildlife conflict incidences and adopt interventions accordingly. Effectively managed means successfully sending back stray out wildlife into forest, retrieval of human dead body and injured victims (human and wildlife)

Unit of measure: Percentageof incidences managed

Disaggregated by: Location (Sundarbans ranges); type of wildlife conflict (e.g. tigers, snakes, wild pig, crocodiles, and deer)

Justification/management utility: Managing human-wildlife conflict incidences will reduce wildlife deaths/injuries by humans and human deaths/injuries by wildlife (e.g. tiger). The percentage indicator captures the overall incidence of human-wildlife conflict which the project is attempting to reduce through outreach and communications efforts.

DATA ACQUISITION AND MEASUREMENT PROCESS

Method of data acquisition: Human-wildlife conflict incidences will be monitored and incident data will be collected in support of Bagh activity staff and FD. A database will be developed, maintained and quarterly reports will be produced based on field data and data from hotline. Human-wildlife conflict incidence report will be collected from Conservation Action team. Human wildlife conflict tracking/reporting sheetwill also be maintained. Outcome Harvesting tool will be used to have the relevant qualitative data on it.

The indicator will be measured by the following formula-

Percentage of incidence effectively managed= (Number incidence effectively managed/total number of incidence) x 100

Data source(s): THC reports, VTRT, FTRT and Emergency Response Team (ERT) response reports, field reports, project reports, FD records

Frequency/timing of data acquisition: Monthly

Responsible individual(s): M&E Specialist, DCOP and COP.

DATA QUALITY ISSUES

Date of initial and future data quality assessment: Internal DQAs will be conducted by M&E team (WildTeam and Bagh) in every six months after M&E plan approval (June 2015 - December 2017)

Known data limitation and significance (if any): Inadequate information on THC shared between Bagh activity and FD will affect proper documentation and reporting.

Actions taken or planned to address data limitations: Maintain quality data (data supported by proper evidence and references) sharing strategy. Training will be provided to relevant staff to ensure quality reporting.

Validity, integrity and reliability of data in the reports will be ensured.

PLAN FOR DATA ANALYSIS, REVIEW AND REPORTING

Review and reporting of data: Annual

OTHER NOTES

Notes on baseline/targets: Baseline is 60% of total incidence happened (2014 data from WildTeam).

Location of data storage: Bagh online database/MIRADI

TARGETS

	Y1	Y2	Y3	Y4	Total
Target	-	65%	70%	80%	80%
Actual					

THIS SHEET LAST UPDATED ON: 15/04/2015

Indicator 13: F4.8.1-6: Number of people with increased economic benefits derived from sustainable natural resource management and conservation as a result of USG assistance

Bagh-PERFORMANCE INDICATOR REFERENCE SHEET

USAID/Bangladesh DO 4: Responsiveness to climate change Improved

DO4 IR 4.2: Enhanced adaptation capacity and resilience to shocks

DO4 Sub-IR 4.2.1: Increased incomes from environmentally sustainable activities

Bagh IR3: Environmentally sustainable livelihoods improved

Indicator: Number of people with increased economic benefits derived from sustainable natural resource management and conservation as a result of USG assistance

Classification: Indicator 13 (Standard # 3, F4.8.1-6), Outcome indicator

Is this an annual report indicator? Yes, annual

DESCRIPTION

Precise definition(s)

Number ofpeople may be a direct count, or it may be determined by multiplying number of households with increased economic benefits by the number of people per household. Increased economic benefits are increases in economic earnings or consumption due to sustainable management or conservation of natural resources, which can include wages, communal revenues, non-cash benefits, and economic benefits from ecosystem services.

Higher = Better

Number of specific to each year, not cumulative.

Specific definition

Beneficiaries include the Sundarbans Reserved Forest (SRF) dependent people (fishermen, crab collectors, wood collectors, honey collectors, *golpata* collectors and other forest resource collectors) and tiger widow who benefit from the Bagh interventions. Bagh will support to establish suitable Alternative Income Generating (AIG) pilot schemes. Number of people with increased economic benefits is specifically defined as beneficiaries who will be applying and adopting ecofriendly AIG and enterprise development options, as a result of participation in Bagh organized training, demonstrations and other activities. As this is a common indicator of Bagh and CREL, both projects will work together here to achieve the results and selection of beneficiaries. Consultation between Bagh and CREL will help to avoid the duplication of activity and support. Bagh will count only the beneficiaries under Bagh activity.

Unit of Measure: Number of people Disaggregated by: Gender

Justification/management utility: AIG pilot scheme will stimulate innovative AIG ideas through a competitive grants scheme. This indicator links sustainable natural resources conservation and management to economic growth and social development objectives. When people receive tangible economic benefits from natural resources management or conservation, they are more likely to value and support the natural resources conservation activities into the future even after the project

ends, creating a sustainable impact. The measure demonstrates project reach.

DATA ACQUISITION AND MEASUREMENT PROCESS

Method of data acquisition: Activity & output tracking, interviews questionnaires surveys on livelihoods and benefits, monitoring of natural resource capture (collected via direct observation or survey methods, using estimates in some cases to approximate impact across households). AIG tracking sheet will be formed and maintained.

Data source(s): Project reports, AIG tracking sheet, observation reports, Public Private Partnership (PPP) reports

Frequency/timing of data acquisition: Quarterly

Responsible individual(s): M&E Specialist, DCOP and COP.

DATA QUALITY ISSUES

Date of initial and future data quality assessment: Internal DQAs will be conducted by M&E team (WildTeam and Bagh) in every six months after M&E plan approval (June 2015- December 2017)

Known data limitation and significance (if any): Number of people with economic benefits does not indicate the actual or relative size of the benefit, which may be a cash or non-cash benefit.

Successfully protected area co-management likely has a greater indirect economic impact (e.g. increased business in restaurants, rickshaws, or tea stalls) but this is very difficult to accurately auantify.

Actions taken or planned to address data limitations: The household (HH) member will be counted under USG assistance.

The mechanism will be followed to ensure the received benefits from the targeted HH/s.

PLAN FOR DATA ANALYSIS, REVIEW AND REPORTING

Review and reporting of data: Annual

OTHER NOTES

Notes on baseline/targets: Baseline is zero. The target will be set by the first quarter of 2015.

Location of data storage: Bagh online database/MIRADI

TARGETS

	Yl	Y2	Y3	Y4	Total
Target	-	tbd	tbd	tbd	tbd
Actual					

THIS SHEET LAST UPDATED ON: 15/04/2015

Indicator 14: C11:Number of people in a target group (e.g. forest resource collectors) who have adopted eco-friendly AIG schemes

Bagh-PERFORMANCE INDICATOR REFERENCE SHEET

USAID/Bangladesh DO 4: Responsiveness to climate change Improved

DO4 Sub-IR 4.2.2: Increased climate resiliency through technologies adopted

Bagh IR 3: Environmentally sustainable livelihoods improved

Sub-IR 3.1:Increased adoption of eco-friendly AIG activities

Indicator: Number of people in a target group (e.g. forest resource collectors) who have adopted eco-friendly AIG schemes

Classification: Indicator 14 (Custom indicator # 11), Outcome indicator

Is this an annual report indicator? Yes, annual

DESCRIPTION

Precise definition(s)

The target group (e.g. forest resource collectors) will be provided training on eco-friendly AIG activities identified under USG assistance. Following the training the target group will adopt eco-friendly AIG that will reduce pressure on forest and ensure sustainable forest resource management.

Specific definition

Bagh will count the number of people in target group (e.g. forest resource collectors) who will adopt identified eco-friendly AIG schemes. The AIG schemes will be introduced to the group through training under USG assistance. The AIG schemes will be selected based on the analysis of best AIG practices and then will be introduced to the group. Also Bagh will assess what influenced the target group to adopt eco-friendly AIG, what was the relative contribution of USAID-funded activities and other actors and factors, what outcomes are these AIG schemes contributing to, how did adopting eco-friendly AIG scheme activities contribute to outcomes, what other actors and factors contributed to outcomes and what was the significance of these outcomes.

Unit of Measure: Number	of people in target
aroup	

Disaggregated by: Gender;

Forest resource collectors (e.g. honey collectors, fish/shrimp fry collectors, fish collectors, crab collectors, Golpata – *Nypa fruticans* collectors, wood/firewood collectors):

Age group.

Justification/management utility: Adopting eco-friendly AIG schemes will support to reduce the pressure on Sundarbans.

DATA ACQUISITION AND MEASUREMENT PROCESS

Method of data acquisition: Data will be collected from the target group through survey and regular communications. Record analysis method will be followed, in parallel. Outcome Harvesting will be applied to have qualitative data on this indicator.

Data source(s): Project reports, survey report, record analysis sheet

Frequency/timing of data acquisition: Quarterly

Responsible individual(s): M&E Specialist, DCOP and COP.

DATA QUALITY ISSUES

Date of initial and future data quality assessment: Internal DQAs will be conducted by M&E team (WildTeam and Bagh) in every six months after M&E plan approval (June 2015 - December 2017)

Known data limitation and significance (if any):Tracking of beneficiaries (migration of target group members).

Actions taken or planned to address data limitations:Unique ID will be introduced. Contact numberand household head national IDwill berecorded. Regular communication will be maintained with beneficiaries by relevant Bagh team.

PLAN FOR DATA ANALYSIS, REVIEW AND REPORTING

Review and Reporting of Data: Annual

OTHER NOTES

Notes on Baseline/Targets: Baseline is zero. The target will be set by the first quarter of 2015.

Location of Data Storage: Bagh online database/MIRADI

TARGETS

	Y1	Y2	Y3	Y4	Total
Target	-	tbd	tbd	tbd	tbd
Actual					

THIS SHEET LAST UPDATED ON: 15/04/2015

Indicator 15: C12: Amount of investment in eco-friendly AIG schemes through PPPs under Bagh

Bagh- PERFORMANCE INDICATOR REFERENCE SHEET

USAID/Bangladesh DO 4: Responsiveness to climate change Improved

DO4 Sub-IR 4.2.3: Improved local governance of livelihood assets

BaghIR 3: Environmentally sustainable livelihoods improved

Sub-IR 3.2:Increased investment in eco-friendly enterprises

Indicator: Amount of investment in eco-friendly AIG schemes through PPPs under Bagh

Classification: Indicator 15 (Custom indicator # 12), Outcome indicator

Is this an annual report indicator? Yes, annual

DESCRIPTION

Precise definition(s) This indicator will report the value (in US dollar) of investment from target group under USG assistance. The value of increased investment indicates the value (in USD) of the total amount of alternative income generating activities invested through the support of Bagh. Only target group households involved with USG assistance will be counted under this indicator.

Specific definition

Bagh will analyze the amount of investment in eco-friendly AIG schemes. Only investment facilitated by the Bagh project will be counted under this indicator. Also Bagh will assess how these investments are implemented by the beneficiaries, whatwas the relative contribution of USAID-funded activities and other actors and factors.

Unit of Measure: Amount of investment (in US dollar)

Disaggregated by: Gender, AIG category

Justification/management utility: Investment on eco-friendly AIG schemes will reduce the pressure on forest resource extraction.

DATA ACQUISITION AND MEASUREMENT PROCESS

Method of data acquisition: Activity & output tracking and Outcome Harvesting tools will be used.

Data source(s): Project reports, AIG tracking sheet

Frequency/timing of data acquisition: Quarterly

Responsible individual(s): M&E Specialist, DCOP and COP.

DATA QUALITY ISSUES

Date of initial and future data quality assessment: Internal DQAs will be conducted by M&E team (WildTeam and Bagh) in every six months after M&E plan approval (June 2015- December 2017)

Known data limitation and significance (if any): Inadequate measures to collect data that might influence data quality and on reported values of this indicator.

Actions taken or planned to address data limitations: Supplementary surveys, field visits (where necessary) will be conducted to ensure data reliability.

PLAN FOR DATA ANALYSIS, REVIEW AND REPORTING

Review and Reporting of Data: Annual

OTHER NOTES

Notes on Baseline/Targets: Baseline is zero. The target will be set by the first quarter of 2015.

Location of Data Storage: Bagh online database/MIRADI

TARGETS

	Yl	Y2	Y3	Y4	Total
Target	-	tbd	tbd	tbd	tbd
Actual					

THIS SHEET LAST UPDATED ON: 15/04/2015

Annex B: Consolidated list of indicators reported under Bagh

SPS	Indicator name	Contribution	
reference	marcaror name	to D04	Source
(f)/custom #		Results	550.55
	e: Improved biodiversity conservation in		by protecting the Bengal
Tiger			by protecting the bengal
1.90.			
Custom 1	Relative abundance of tigers in target habitat	IR 4.1	Tiger monitoring survey results (Khal survey and Camera trap survey results)
Custom 2	Relative abundance of tiger prey species in target habitat	IR 4.1	Tiger prey monitoring survey results
	nservation practices improved, IR2: Targ	geted threats to	wildlife decreased, IR3:
	lly sustainable livelihoods improved		
F4.8.2-28	Number of laws, policies, strategies, plans, or regulations addressing climate change (mitigation or adaptation) and/or biodiversity conservation officially proposed, adopted, or implemented as a result of USG assistance	Sub IR 4.1.3	Project reports, meeting minutes, consultation minutes and reports, copies of the relevant documents including parliamentary proceedings, government agency policy memos, minutes of policy committee meetings, official gazette notifications, approved policy documents and other official documentation, published laws, policies, strategies, plans, regulations, agreement, protocol and guidelines
IR 1: Wildlife co	onservation practices improved		
Custom 3	Percentage of individuals with increased knowledge in community groups on wildlife conservation	Sub IR 4.1.1	Knowledge survey report, individual knowledge survey checklist
Custom 4	Number of individual activities conducted by community groups (VTRTs, <i>BaghBondhu</i>) for wildlife conservation	Sub IR 4.1.2	Project reports, meeting minutes, FGD report, case study report, individual activity reporting/tracking sheet
<i>Sub-IR 1.1:</i> Enh	anced capacity to adopt wildlife conser	vation practices	
F4.8.1-29	Number of person hours of training in natural resources management and/or biodiversity conservation	Sub IR 4.1.1	Training plan and reports, project reports, evaluation reports

SPS	Indicator name	Contribution	
reference (f)/custom #		to D04 Results	Source
(I)/CUSIOIII #	supported by USG assistance	Results	
Sub-IR 1.2: Inc	reased knowledge base on wildlife con	servation	
Custom 5	Number of priority research studies	Sub IR 4.1.2	Research
	conducted for better understanding of Sundarbans ecosystem		reports/documents, project reports, priority research tracking sheet
	re: Improved biodiversity conservation in 2: Targeted threats to wildlife decreased		by protecting the Bengal
Custom 6	Number of hectares of biological significance and/or natural resources under improved natural resource management	IR 4.1	Project reports, hectare coverage tracking sheet, map
IR 2: Targeted	threats to wildlife decreased		
<i>Sub-IR 2.1:</i> Im	proved law enforcement and monitoring	g to reduce wildl	ife trafficking
Custom 7	Number of jointcommunity patrolling groups functioning	Sub IR 4.1.2	Project reports, patrolling group performance tracking sheet
Custom 8	Number of patrols conducted inside forest	Sub IR 4.1.2	Project reports, patrolling group performance tracking sheet
<i>Sub-IR 2.2:</i> Im	proved management to decrease humo	an-wildlife confli	ct
Custom 9	Number offorest resource collectors applying safety measures	Sub IR 4.1.1	Project reports, survey reports
Custom 10	Percentage of human-wildlife conflict incidences effectively managed	IR 4.1	THC reports, VTRT, FTRT and Emergency Response Team (ERT) response reports, field reports, project reports, FD records
IR 3: Environr	mentally sustainable livelihoods improve		
F4.8.1-6	Number of people with increased economic benefits derived from sustainable natural resource management and conservation as a result of USG assistance	Sub IR 4.2.1	Project reports, AIG tracking sheet, observation reports, Public Private Partnership (PPP) reports
	reased adoption of eco-friendly AIG act		
Custom 11	Number of people in a target group (e.g. forest resource collectors) who have adopted eco-friendly AIG schemes	Sub IR 4.2.2	Project reports, survey report, record analysis sheet

SPS reference (f)/custom #	Indicator name	Contribution to D04 Results	Source								
<i>Sub-IR 3.2:</i> Inc	Sub-IR 3.2: Increased investment in eco-friendly enterprises										
Custom 12	Amount of investment in eco-friendly AIG schemes through PPPs under Bagh	Sub IR 4.2.3	Project reports, AIG tracking sheet								

Annex C: Bagh performance data table

#	Indicator	Unit of Measure	Disaggregat ion	Baseli ne Year	Baseline Value	2014 Target	2014 Actual	2015 Target	2015 Actual	2016 Target	2016 Actual	2017 Target	2017 Actual
Ba	Bagh Objectives: Improved biodiversity conservation in the Sundarbans by protecting the Bengal Tiger												
1.	Relative abundance of tigers in target habitat	Tiger track set/km (Khal survey) and density: number of tiger/100 square km (Camera trap)	Location (Sundarbans Ranges, Sanctuaries)	2016	No reliable baseline information is available on relative abundance of tigers and tiger density in Bangladesh Sundarbans in recent past. The first survey results in April 2016 for Khal survey and Camera trap will be established as baseline. In project					tbd		tbd	

#	Indicator	Unit of Measure	Disaggregat ion	Baseli ne Year	Baseline Value	2014 Target	2014 Actual	2015 Target	2015 Actual	2016 Target	2016 Actual	2017 Target	2017 Actual
2.	Relative abundance of tiger prey species in target habitat	0 , ,	Location (Sundarbans Ranges, Sanctuaries)	2016	year 4 any change in baseline will be reported No reliable baseline information available on abundance of tiger-prey in	-	-	-	-	tbd		tbd	
		grid.			Sundarbans . The first survey results in April 2016 for Khal survey and Camera trap will be established as baseline								

IR1: Wildlife conservation practices improved, IR2: Targeted threats to wildlife decreased, IR3: Environmentally sustainable livelihoods improved

#	Indicator	Unit of Measure	Disaggregat ion	Baseli ne Year	Baseline Value	2014 Target	2014 Actual	2015 Target	2015 Actual	2016 Target	2016 Actual	2017 Target	2017 Actual
3	Number of laws, policies, strategies, plans, or regulations addressing climate change (mitigation or adaptation) and/or biodiversity conservation officially proposed, adopted, or implemented as a result of USG assistance	Number of laws, policies, strategies, plans, regulations, agreement, protocol and guidelines	Category (laws, policies, strategies, plans, regulations, agreement, protocol, and guidelines) Stages of development (analyzed, drafted, proposed, adopted, and implemented)	N/A	Zero	-	-	tbd		tbd		tbd	
IR 1	: Wildlife conservation	practices improve	d										
4	Percentage of individuals with increased knowledge in community groups on wildlife	Percentage of individuals with increased knowledge	Gender, group category (VTRT, BaghBondhu , forest resource	2015	The baseline value will be developed by the first quarter of	-	-	10%		10%		10%	

#	Indicator	Unit of Measure	Disaggregat ion	Baseli ne Year	Baseline Value	2014 Target	2014 Actual	2015 Target	2015 Actual	2016 Target	2016 Actual	2017 Target	2017 Actual
	conservation		collectors)		2015								
5	Number of individual activities conducted by community groups (VTRTs, BaghBondhu) for wildlife conservation	Number of individual activity	Group category (VTRT, BaghBondhu	2014	1,300	-	-	1,300		1,400		1,500	
Sub	o-IR 1.1: Enhanced cap												
6	Number of person hours of training in natural resources management and/or biodiversity conservation supported by USG assistance	Number of person hours	Gender, category of organization /groups	N/A	Zero	-	-	tbd		tbd		tbd	
Sub	o-IR 1.2:Increased know	wledge base on wi	dlife conservat	ion									
7	Number of priority research studies conducted for better	Number of research studies	Category of research (threat	N/A	Zero	-	-	-	-	5		5	

#	Indicator	Unit of Measure	Disaggregat ion	Baseli ne Year	Baseline Value	2014 Target	2014 Actual	2015 Target	2015 Actual	2016 Target	2016 Actual	2017 Target	2017 Actual
	understanding of Sundarbans ecosystem.	conducted	assessment, wildlife and habitat monitoring, social research) Stages of research (planned, data collected, analyzed, drafted, and final report)										
Ba	gh Objective: Improve	d biodiversity conse		undarbo	ıns by protecti	ng the Be	engal Tige		2: Target	ed threats	to wildlife		sed
8	Number of hectares of biological significance and/or natural resources under improved natural resource management	Hectares	Location (Sundarbans Ranges)	N/A	Zero	-	-	40,000		120,000		182,664	

#	Indicator	Unit of Measure	Disaggregat ion	Baseli ne Year	Baseline Value	2014 Target	2014 Actual	2015 Target	2015 Actual	2016 Target	2016 Actual	2017 Target	2017 Actual
	2: Targeted threats to p-IR 2.1: Improved law		monitoring to re	educe w	ldlife trafficki	ng							
9	Number of joint community patrolling groups functioning	Number of joint community patrolling groups functioning	Location (Sundarbans Ranges)	N/A	Zero	-	-	-	-	2		4	
10	Number of patrols conducted inside forest	Number of patrol conducted	Location (Sundarbans Ranges)	N/A	Zero	-	-	6		12		12	
11	Number of forest resource collectors applying safety measures	Number of forest resource collectors	Stakeholder group, gender, Sundarbans Ranges, new and continuous users	N/A	Zero	-	-	300		350		350	
12	Percentage of human-wildlife conflict incidences	Percentage of incidences	Location (Sundarbans	2014	60% (2014 data from	-	-	65%		70%		80%	

#	Indicator	Unit of Measure	Disaggregat ion	Baseli ne Year	Baseline Value	2014 Target	2014 Actual	2015 Target	2015 Actual	2016 Target	2016 Actual	2017 Target	2017 Actual	
	effectively managed	managed	ranges)		WildTeam)									
IR 3	IR 3: Environmentally sustainable livelihoods improved													
13	Number of people with increased economic benefits derived from sustainable natural resource management and conservation as a result of USG assistance	Number of people	Gender	N/A	Zero	-	-	tbd		tbd		tbd		
Suk	o-IR 3.1: Increased add	ption of eco-friend	ly AIG activities	;										
14	Number of people in a target group (e.g. forest resource collectors) who have adopted eco- friendly AIG schemes	Number of people in target group	Gender	N/A	Zero	-	-	tbd		tbd		tbd		

#	Indicator	Unit of Measure	Disaggregat	Baseli	Baseline	2014	2014	2015	2015	2016	2016	2017	2017
			ion	ne	Value	Target	Actual	Target	Actual	Target	Actual	Target	Actual
				Year									
2.5			0 1 410	N 1 / A	_			.1. 1		A1 1		A1 1	
15	Amount of	Amount of	Gender, AIG	N/A	Zero	-	-	tbd		tbd		tbd	
	investment in eco-	investment (in US	category										
	friendly AIG	dollar)											
	schemes through												
	PPPs under Bagh												

Annex D: Performance management task schedule

Title	Reason	Date	Frequency	Person	Notes / Next Steps
Establish web based data management system (Bagh online database/MIRADI)	To make sure the adequate, valid and transparent data management and use of monitoring data	April 2015	Once (may be updated if needed)	M&E Specialist	Setting up a new performance monitoring system
M&E training to Bagh staff	To ensure smooth monitoring process and data quality	January, 2015 and continued	Once (Could be more if required)	DCOP, M&E Specialist	Training is required before the data collection
Data collection	To keep records for project results and performance	March, June, September and December of each year	Quarterly	M&E Specialist	-
Data analysis	To find out the project performance	January, April, July and October of each year	Quarterly	M&E Specialist	-
Data quality assessment	To meet the data quality requirements of USAID	Every six month after M&E Plan approval	Quarterly	COP, DCOP, M&E Specialist, STTAs	Ensure DQAs for each indicator

Title	Reason	Date	Frequency	Person	Notes / Next Steps
Review and revise M&E Plan	To update critical assumptions, indicators, data collection process/method	January of each year	Yearly	USAID, COP, DCOP, M&E Specialist	-
Feedback from implementing partners	To observe the quality of activity, results and data quality standards	January, April, July and October of each year	Quarterly	M&E Specialist	-
Monitoring by WildTeam	To meet data quality standards and analyze project performance	January of each year	Yearly	WildTeam, COP, DCOP, M&E Specialist	-
Evaluation by USAID	To review the project performance and impact	December, 2015 and December 2017	Project performance: mid period of the project Impact: End of the project	USAID to determine	-

Annex E: Data collection plan

Indicat	Indicators	Data source	Survey method	Frequency of	Responsibility for
or no.				collection	data collection

Indicat or no.	Indicators	Data source	Survey method	Frequency of collection	Responsibility for data collection
Ind.1	Relative abundance of tigers in target habitat	Tiger monitoring survey results (Khal survey and Camera trap survey results)	Tiger sign survey (Khal), and Camera trap survey	Two field seasons (November 2015 to March 2016, November 2016 to March 2017) for Khal survey. Two field seasons (November 2015 to March 2016, November 2016 to March 2017) for Camera trap survey	SI, WildTeam, BCAS
Ind.2	Relative abundance of tiger prey species in target habitat	Prey monitoring survey results	Khal surveys for tiger prey tracks, Camera-tapping to get tiger-prey index, Line transacts in open and accessible areas (relatively thin and accessible forest patches, and grassland-scrub), Pellet count in a few selected sampling blocks to verify its usefulness in estimating tiger prey- population density, use of other innovative techniques such as tiger prey monitoring through thermal- imaging using Unmanned Aerial	Two field seasons (November 2015 to March 2016, November 2016 to March 2017) for Khal survey. Two field seasons (November 2015 to March	SI, WildTeam, BCAS

Indicat or no.	Indicators	Data source	Survey method	Frequency of collection	Responsibility for data collection
			Vehicle (UAV), Use of home-range information of tiger prey to estimate density etc.	2016, November 2016 to March 2017) for Camera trap survey	
Ind.3	Number of laws, policies, strategies, plans, or regulations addressing climate change (mitigation or adaptation) and/or biodiversity conservation officially proposed, adopted, or implemented as a result of USG assistance	Project reports, meeting minutes, consultation minutes and reports, copies of the relevant documents including parliamentary proceedings, government agency policy memos, minutes of policy committee meetings, official gazette notifications, approved policy documents and other official documentation, published laws, policies, strategies, plans, regulations, agreement, protocol and guidelines	Bagh M&E team will set a baseline through consultation with component leaders. Policy processes and/or guidelines will be tracked through regular contact with key stakeholders involved, and through minutes of relevant meetings and committees. Evidence to support reporting by stage attained in formalizing laws, policies, strategies, plans, regulations, agreement, protocol and guidelines will be compiled (such as reports, consultation minutes, etc.). The team will obtain copies of the relevant documents including parliamentary proceedings, government agency policy memos, minutes of policy committee meetings, official gazette notifications, published laws and regulations, and guidelines.	Quarterly	SI, WildTeam, BCAS

Indicat or no.	Indicators	Data source	Survey method	Frequency of collection	Responsibility for data collection
Ind.4	Percentage of individuals with increased knowledge in community groups on wildlife conservation	Knowledge survey report, individual knowledge survey checklist	Data will be collected through knowledge survey. A checklist to assess the knowledge level on wildlife conservation will be developed and quarterly data will be collected following the checklist using random sample survey with the training participants. Pre and post evaluation of knowledge will also be conducted in each training. Outcome Harvesting tool will also be used to measure data and outcomes. The following formula will be used to measure this indicator: Percentage of knowledge = (Total score obtained/Total score) x 100	Quarterly	SI, WildTeam, BCAS
Ind.5	Number of individual activities conducted by community groups (VTRTs, <i>BaghBondhu</i>) for wildlife conservation	Project reports, meeting minutes, FGD report, case study report, individual activity reporting/tracking sheet	Activity & output tracking and Outcome Harvesting tool will be used. Focus Group Discussion (FGD) will be conducted with groups to collect data. Case study will also be conducted.	Quarterly	SI, WildTeam, BCAS
Ind.6	Number of person hours of training in natural resources management and/or biodiversity conservation supported by USG assistance	Training plan and reports, project reports, evaluation reports	Performance monitoring data will be collected using activity and output tracking tool (participant training report forms for all participants). Indicator will be calculated as the number of people participating in each scheduled training event as per project requirement. Pre	Quarterly	SI, WildTeam, BCAS

Indicat or no.	Indicators	Data source	Survey method	Frequency of collection	Responsibility for data collection
			and post evaluation will be conducted to assess the knowledge of the participants. To assess the quality of training, evaluation will be conducted at the end of the training. The following formula will be used to measure the indicator. (Instruction hours of USG supported training) x (Number of people completing each training) = Person hours of training supported by USG assistance.		
Ind.7	Number of priority research studies conducted for better understanding of Sundarbans ecosystem	Research reports/documents, project reports, priority research tracking sheet	Data will be collected fromResearch and Monitoring Team and will be cross checked with FD. Research report will be analyzed. Priority research tracking sheet will be maintained. Different stages of research data will also be collected and documented.	Quarterly	SI, WildTeam, BCAS
Ind.8	Number of hectares of biological significance and/or natural resources under improved natural resource management	Project reports, hectare coverage tracking sheet, map	Patrol coverage inside forest data will be collected from Anti-trafficking Action workstream. Data will be collected in square kilometer and during analysis it will be converted to hectares i.e., 1 sq. km = 100 hectare.	Quarterly	SI, WildTeam, BCAS

Indicat or no.	Indicators	Data source	Survey method	Frequency of collection	Responsibility for data collection
Ind.9	Number of joint community patrolling groups functioning	Project reports, patrolling group performance tracking sheet	Activity & output tracking and Outcome Harvesting tool will be used. Also the performance or 'functioning' criteria will be analyzed based on the criteria/checklist will be set for joint patrolling group.	Quarterly	WildTeam, SI, BCAS
Ind.10	Number of patrols conducted inside forest	Project reports, patrolling group performance tracking sheet	Activity and output tracking tool will be used. Also the performance of patrol groups will be analyzed based on the criteria/checklist will be set for the patrolling group.	Quarterly	WildTeam, SI, BCAS
Ind.11	Number offorest resource collectors applying safety measures	Project reports, survey reports	Data will be collected after the training to measure at outcome of training and application of safety measures through the performance survey, Outcome Harvesting method will also be used. Forest resource collector's quarterly monitoring format will be used as well.	Quarterly	WildTeam, SI, BCAS

Indicat or no.	Indicators	Data source	Survey method	Frequency of collection	Responsibility for data collection
Ind.12	Percentage of human-wildlife conflict incidences effectively managed	THC reports, VTRT, FTRT and Emergency Response Team (ERT) response reports, field reports, project reports, FD records	Human-wildlife conflict incidences will be monitored and incident data will be collected in support of Bagh Project staff and FD. A database will be developed, maintained and quarterly reports will be produced. Human wildlife conflict tracking/reporting sheet will be maintained. Outcome Harvesting tool will be used to have the relevant qualitative data on it. The indicator will be measured by the following formula-Percentage of incidence effectively managed= (Number incidence effectively managed/total number of incidence) x 100	Quarterly	WildTeam, SI, BCAS
Ind.13	Number of people with increased economic benefits derived from sustainable natural resource management and conservation as a result of USG assistance	Project reports, AIG tracking sheet, observation reports, Public Private Partnership (PPP) reports	Activity and output tracking, interviews questionnaires surveys on livelihoods and benefits, monitoring of natural resource capture (collected via direct observation or survey methods, using estimates in some cases to approximate impact across households). AIG tracking sheet will be formed and maintained.	Quarterly	BCAS, WildTeam

Indicat or no.	Indicators	Data source	Survey method	Frequency of collection	Responsibility for data collection
Ind.14	Number of people in a target group (e.g. forest resource collectors) who have adopted eco-friendly AIG schemes	Project reports, survey report, record analysis sheet	Data will be collected from the target group through survey and regular communications. Record analysis method will be followed, in parallel. Outcome Harvesting will be applied to have qualitative data on this indicator.	Quarterly	BCAS, WildTeam
Ind.15	Amount of investment in eco- friendly AIG schemes through PPPs under Bagh	Project reports, AIG tracking sheet	Activity & output tracking and Outcome Harvesting tools will be used.	Quarterly	BCAS, WildTeam

Annex F: The use of Outcome Harvesting to enrich Bagh indicators

Justification/management utility for using qualitative measures together with quantitative indicators

Most of the M&E indicator descriptions are comprised of a quantitative measure and additional text referring to "related qualitative results." Collating qualitative information that relates to the numerical indicator will help us understand the actors and factors that contributed to the attainment of the indicator and the process by which the indicator contributed to behavior change outcomes (positive and negative, expected and unexpected) that are associated with project outcomes (IR 1-3; see Figure F-1). Gaining a detailed understanding of the expected and unexpected results leading to and from indicators will enhance evidence-based adaptive management, helping Bagh to build on successes and address challenges. It will inform learning and help us understand project effectiveness and sustainability.

The primary method for obtaining this qualitative information in the Bagh activity will be Outcome Harvesting (OH). OH uses a definition of an outcome derived from the Outcome Mapping methodology - observable changes in the behavior, relationships, activities and actions of individuals, groups, organizations or institutions that were influenced in a small or large way, directly or indirectly, intentionally or not by the project under consideration.

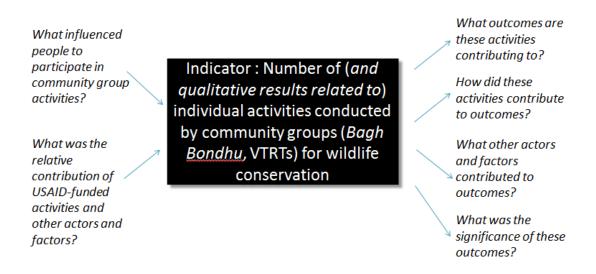


Figure 6: The upstream and downstream relationships between a numerical indicator and related qualitative results

Outcome Harvesting Definition:Outcome harvesting uses a General Elimination Methodology (GEM) employed in numerous disciplines, as varied as forensic science, epidemiology, archaeology and geology, which works backward from an effect to determine its cause. That is, first the change in a social actor is identified and then the specific contribution of the project is determined. For all the outcomes the changes must be verifiable. In addition, the explanation of their significance will be logical and the contribution of the project plausible. Each outcome comprises of:

- 1. An outcome statement of one sentence describing who changed what, when and where, and
- 2. A contribution statement describing how Bagh contributed and the significance of the contribution.

Outcome and contribution statements need to be SMART:

- Specific: Each outcome is formulated in sufficient detail so that a primary intended user without specialized subject or contextual knowledge will be able to understand and appreciate what changed.
- <u>Measurable:</u> The description of the outcome provides objective, verifiable quantitative and qualitative information, independent of who is collecting data.
- <u>Achieved:</u> By Bagh while perhaps not fully attributable to Bagh. A plausible relationship, a logical link between the outcome and what Bagh did that contributed to it. What did Bagh do, when and where that contributed wholly but probably partially, indirectly or indirectly, intentionally or unexpectedly.
- Relevant: The outcome represents noteworthy progress towards the impact you desire.
- <u>Timely:</u> The outcome occurred within the duration of the project although Bagh's contribution may have been months or even years before.

Method of data acquisition: OH will be incorporated into regular project activities and will be supported by further needs-driven monitoring (e.g. issue-specific surveys and sampling and in-depth case studies). Data acquisition methods will include interviews (individual or focus group discussions), group work conducted in Project Learning Events and extraction of information contained in documents.

Data sources: Information will be contributed by Bagh staff, implementation partners, those participating in project activities, villagers, etc. depending on who is the most knowledgeable about the topic under consideration and documentary sources where relevant information is contained.

Frequency/timing of data acquisition: Data collection for Outcome Harvesting will be opportunistic, activity specific (e.g. those participating in training events), needs-driven and periodic (in Project Learning Events).

Disaggregation: Data will be disaggregated by predetermined and emergent dependent categories depending on data and uses e.g. predefined objectives, gender, economic benefits, sustainability, etc.

Responsible individuals: The M&E team will be responsible for facilitation of data collection, analysis and interpretation with technical support provided by Bagh M&E STTAs.

Date of initial and future data quality assessment: The initial survey work will be undertaken in Q1 2015 together with baseline surveys. There will be ongoing quality assessment.

Known data limitation and significance: See Table 1: (Possible survey methods and relevant limitations).

Action taken to support data acquisition and learning: The M&E team and STTAs will support the whole organization in M&E-related activities in Bagh Learning Events, specific training and mentoring.

Plan for data analysis: Data will be summarized in a database, categorized by predefined and emergent categories, mapped to objectives and reviewed in terms of relevance to users and uses ("so what?") and input into project implementation/planning ("now what?").

Review and reporting of data: Annual and as-dictated by needs.

Notes on baseline/targets: OH during baseline data acquisition will help the team understand the processes that have contributed to baseline values.

Location of data storage:MicrosoftAccess and Excel.



USAID's Bagh Activity

WildTeam
House 42, Road 38
Gulshan 2, Dhaka 1212
+88 02 9896370
Email: info@wild-team.org
www.wild-team.org